FIRE ENGINEERING

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JULY, 1947

Radio Equipment in Fire Alarm Headquarters at Birmingham (See Article in This Issue)

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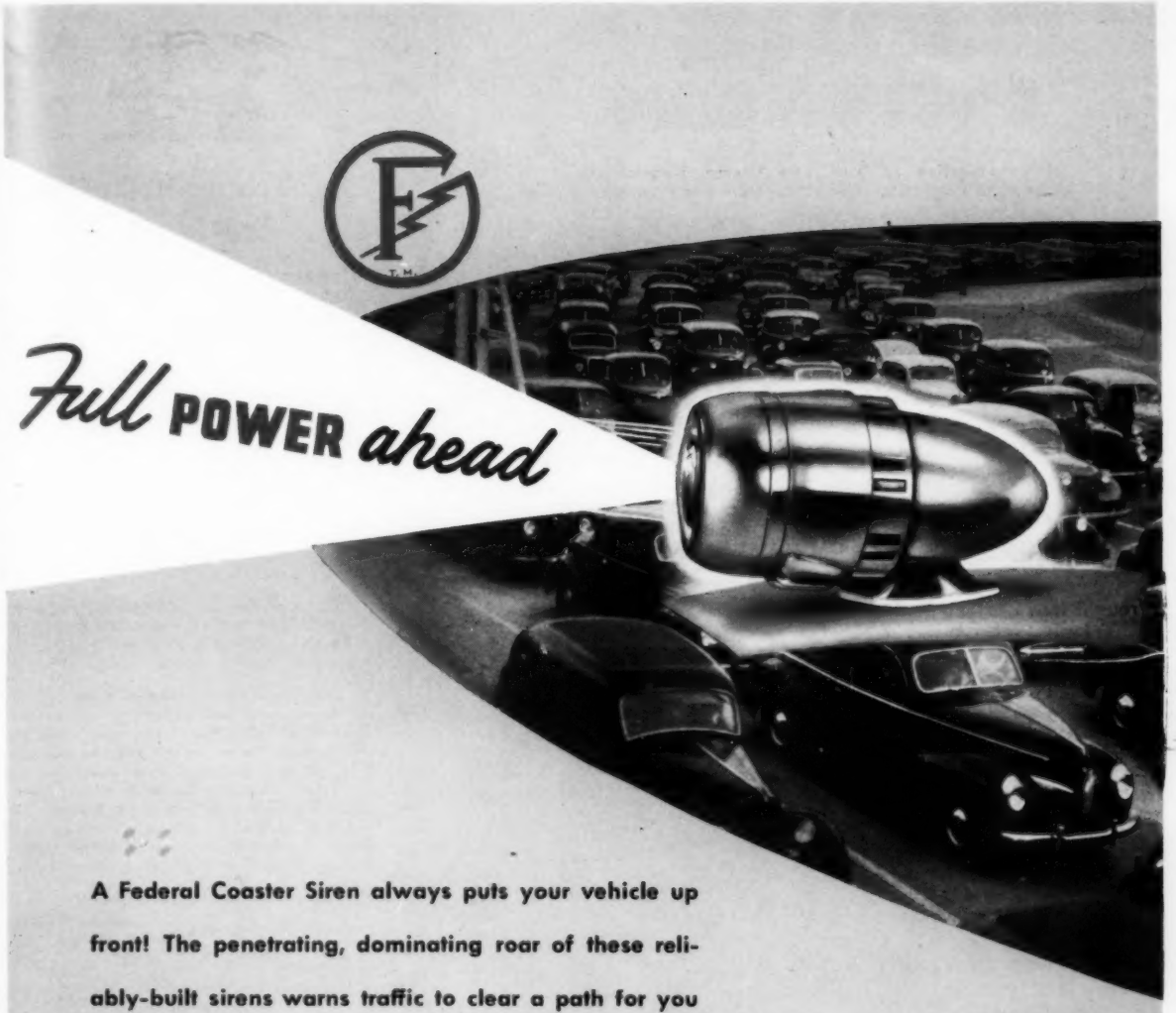

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FIRE ENGINEERING

A Consolidation of FIRE AND WATER ENGINEERING, THE FIRE ENGINEER, FIRE PROTECTION *and* FIRE SERVCE

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FRED SHEPPERD
Editor

ROI B. WOOLLEY
Assistant Editor

The 'Fraternity' of the Fire Service

THERE'S one thing about the fire service that often mystifies and even surprises people who first come in contact with members of the service.

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- P. S.: See You in New York—

August 19-23. at the I.A.F.C.

The Publishers

FIRE ENGINEERING

The Journal of the Fire Profession since 1877; published on the fifteenth of each month by Case-Shepperd-Mann Publishing Corp., 24 West 40th St., New York 18, N. Y., also publishers of *Water Works Engineering, Sewage Works Engineering*, etc. ¶Subscription price: U. S., Latin America and Canada, $3.00 a year; Foreign, $4.00; Single copies. 35c. ¶Member of Audit Bureau of Circulations and Associated Business Papers. Inc. ¶Entered as second-class matter April 15, 1929, at the Post Office at New York, N. Y., under Act of March 3, 1879. ¶Contents of this issue copyrighted, 1947, by Case-Shepperd-Mann Publishing Corp. President and Advertising Director, KARL M. MANN; Vice-President and General Manager, I. HERBERT CASE; Secretary and Editorial Director, FRED SHEPPERD; Assistant Advertising Director, WALTER H. FREDRICKS; Eastern Representative, ALFRED J. HOUGHTON; Advertising Manager, WILLIAM J. GIBSON; Circulation Manager, W. H. TOPHAM. CHICAGO OFFICE: W. S. CLEVENGER and L. M. ROCHE, 8 So. Dearborn St., Chicago 3, Ill.; SAN FRANCISCO: CHARLES H. WOOLLEY, 605 Market Street, San Francisco 5, Calif.; LOS ANGELES: AUGUST HAURIN, 6000 Miramonte Blvd., Los Angeles 1, Calif. ¶Printed in U. S. A.

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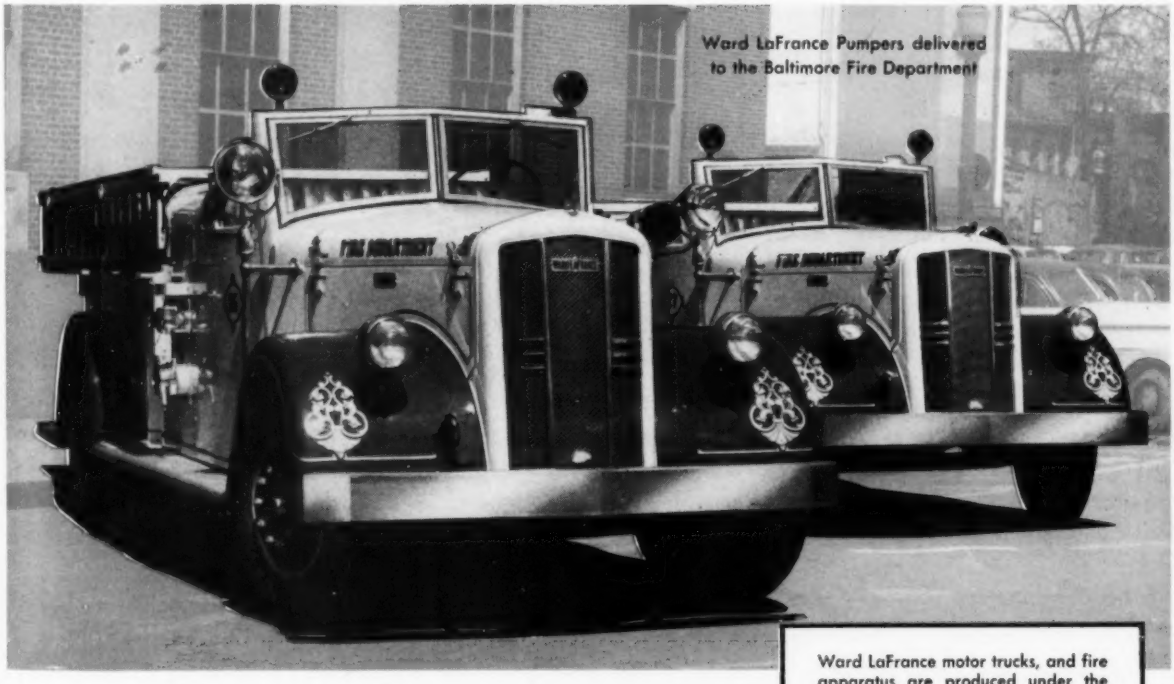

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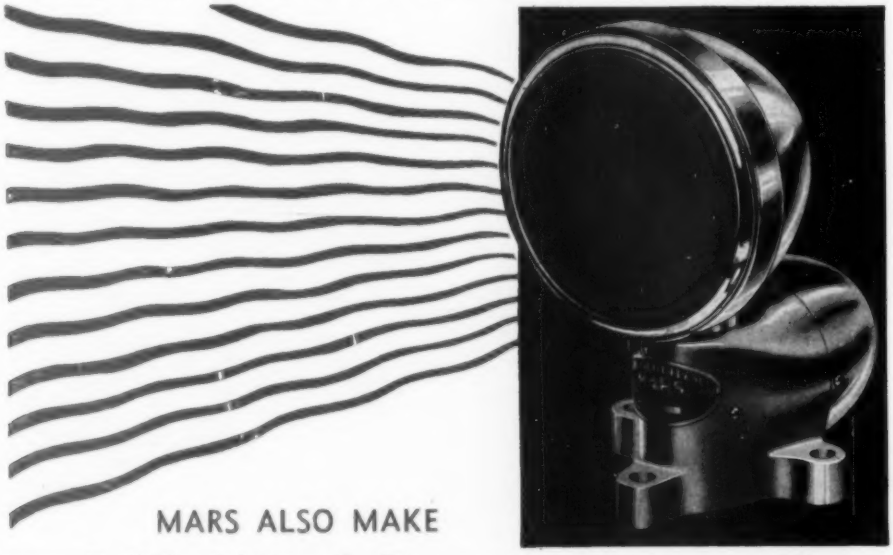

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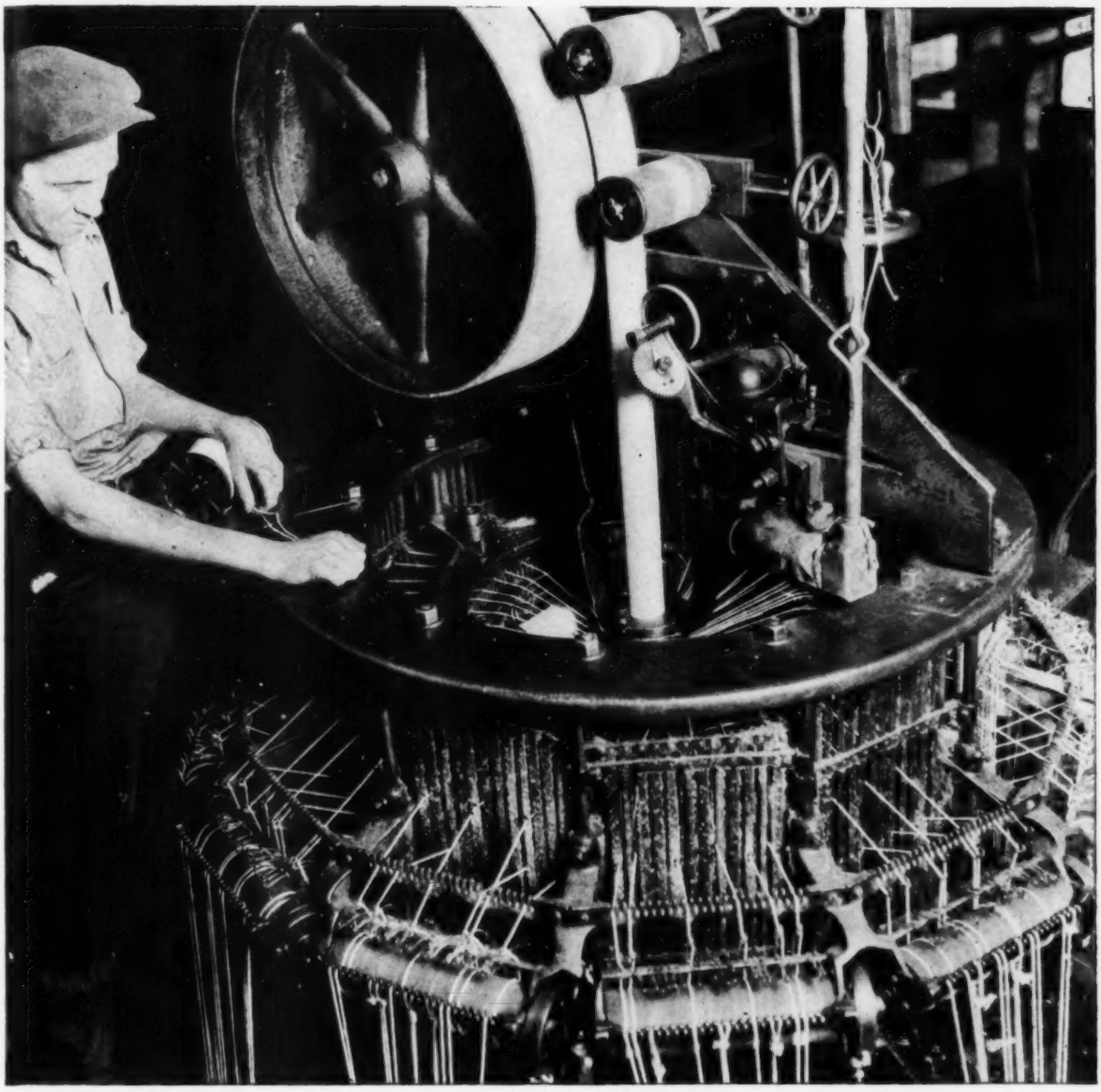

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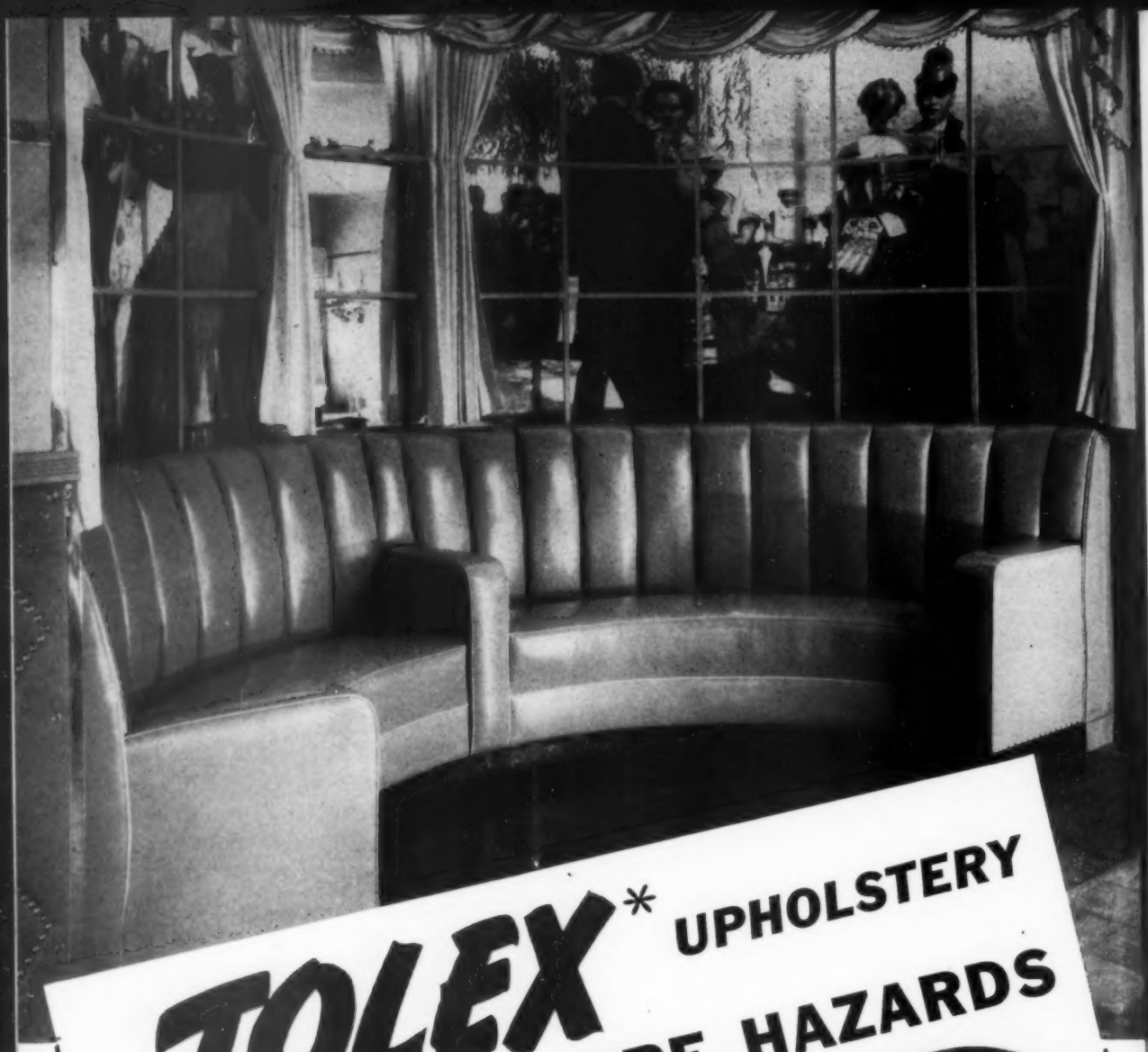

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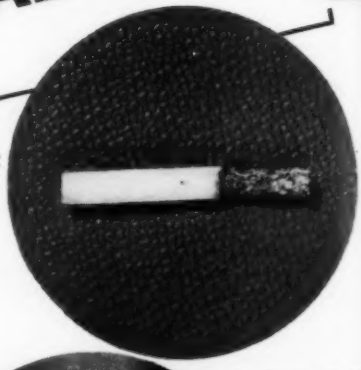

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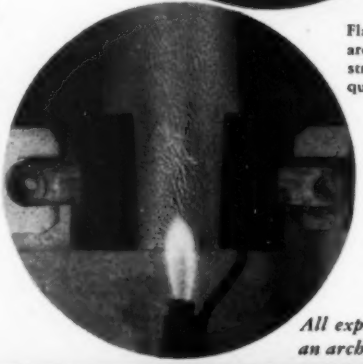

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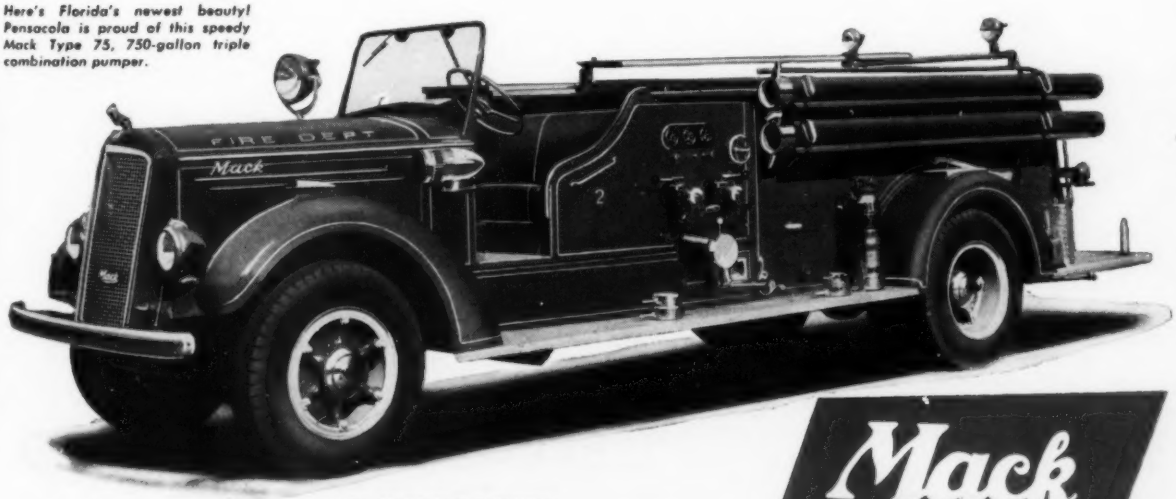
Here's Florida's newest beauty! Pensacola is proud of this speedy Mack Type 75, 750-gallon triple combination pumper.



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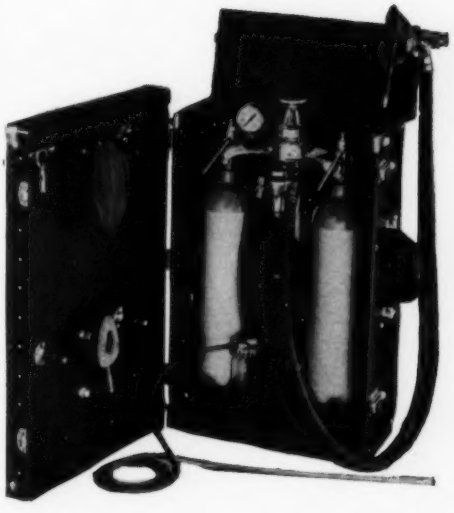

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For complete information write the factory or call your Midwestern dealer, who can now show you our new fabrics made from natural rubber compounds.

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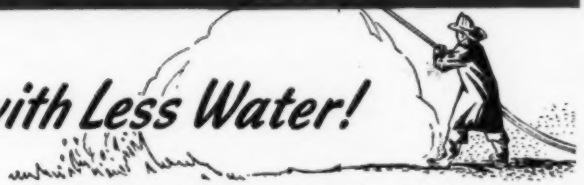

Half the weight of the famous Rockwood all-purpose nozzle, the new LIGHTweight special aluminum-alloy type SG-48 WaterFOG Nozzle will give you three types of discharge — one to fit every need for providing all-around fire protection.

Easy to install and operate, this amazing new improved Rockwood WaterFOG Nozzle will permit your firemen to reach the very root of the fire and to attack it without physical punishment. It will also provide them with greater protection from fire, smoke and fumes.

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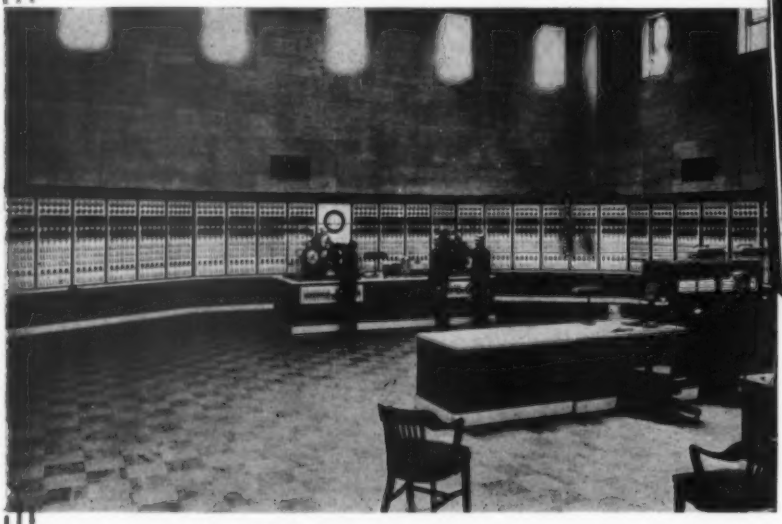
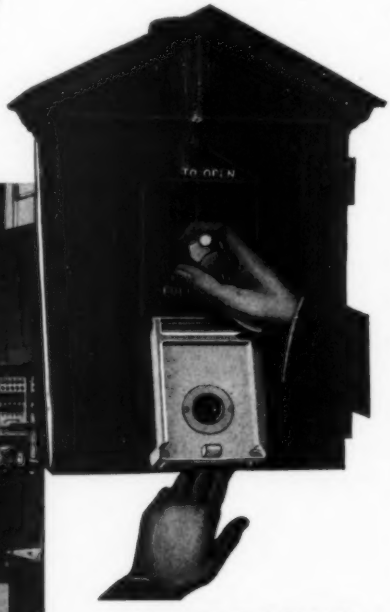




ENCOURAGE THE PROMPT USE OF FIRE ALARM BOXES

READY AND WAITING FOR THE ALARM

One of the largest and most efficiently designed fire alarm control rooms in the world with operators constantly on duty to receive and transmit alarms of fire to the fire fighting forces, and a magnificent array of modern fire extinguishing equipment, but — there is no action until an alarm is given and the location of fire determined. Not until then is the fire department energized. The effectiveness of the municipal fire defenses is limited to the adequacy of the means employed for sending alarms.

Inadequate box distribution causes delay, confusion, fire waste and the consequent impairment of national resources. When fires occur, the distance to the nearest fire alarm box is a matter of vital consequence— 300 feet in mercantile and manufacturing districts and 500 feet in residential districts are the recognized maximums for safety. The U. S. Chamber of Commerce is responsible for the assertion — *"There is practically no City where there are enough fire alarm boxes!"*

Plans for improvement are in order — we will cooperate freely.

THE GAMEWELL COMPANY
Newton Upper Falls, Massachusetts.

FIRE ENGINEERING

JULY, 1947 VOL. 100, NO. 7

With the Editor

The Coast Guard Reports— Elsewhere in this issue is a condensed summary of the Coast Guard report of its investigation into the Texas City disaster.

The Coast Guard's findings confirm what everyone has known who has had an opportunity to study post-war practices and procedures for handling, storing and transporting dangerous materials, viz: safety precautions are generally being overlooked, if not flagrantly flouted.

Two factors connected with the report—or perhaps we should say, omitted from the report—concern the fire service. The first is the regrettable fact that while longshoremen were ordered off the burning Grandcamp and the hatches battened down, there is no evidence to indicate that either these men, their superiors, or anyone else warned the Texas City firemen and their Republic Oil brother volunteers, who were carrying the fight against the fire right aboard the doomed ship, of the possibility of trouble. Somebody aboard ship must have envisaged trouble or the crew and handlers would not have been ordered off the vessel. But the regrettable fact is that fire fighters were left to walk, unwarned, into certain death.

The second observation has to do with the recommendations of the Coast Guard for a special committee to study and determine every aspect of the characteristics of ammonium nitrate, develop additional information relative to its hazards in transportation, handling and stowage. This is all very well, but the joker lies in the suggested "board" to do this job. It is to be composed entirely of representatives of government agencies, including the Interstate Commerce Commission and Bureau of Explosives. But those municipal and other agencies and services that come into the closest contact with these hazardous materials, and are most concerned with their transportation, handling and storage, are omitted from the picture.

If it isn't too late, FIRE ENGINEERING suggests that this particular study, and others like it that are vitally needed, be included as an integral factor in the Action Program of the President's Conference, and that the continuing Committee be included in any "boards" or special committees designated to carry forward this essential work.

Party Lines— And Priority In Oneonta, N. Y., Mrs. George A. Ouimet tried frantically to call the fire department over her party telephone line but was balked by talkative neighbor women who, despite her plea that she be given the line because her home was burning, stubbornly refused to yield priority. The house was saved from total destruction only because a patrolman, 600 feet away, pulled a box, bringing the firemen.

In another case, at St. Clairsville, Ohio, Frank Robinson lost his home because two women refused to be convinced by his plea that they surrender their, and his, party line, long enough to enable him to summon firemen. "We are paying for our telephones and we intend to use them as long as we want to," they are reported to have told him. By the time fire fighters arrived, only one piece of furniture could be saved from the blaze.

These two cases, occurring within a few days of each other, are but two among many that have come to the attention of this journal.

Legally, the telephone company cannot be held responsible for the selfishness and thoughtlessness of its subscribers. No one doubts that the company would gladly eliminate such misuse of its services if it could do so but, lacking legislation, there is nothing either the company or the fire service can do about it. Meanwhile, lives continue to be jeopardized, property lost, and the fire service discredited because of this evil.

This situation, however, emphasizes the fallability of the telephone as a means of communicating fire alarms. And it does more than this: it suggests to forethoughtful administrators of the fire service and fire service communications, the wisdom of asking some pointed questions on the subject of "responsibility" of the telephone or telegraph interests who approach them with the proposition to install radiotelephone service on a rental or lease basis.

Fred Skeppard

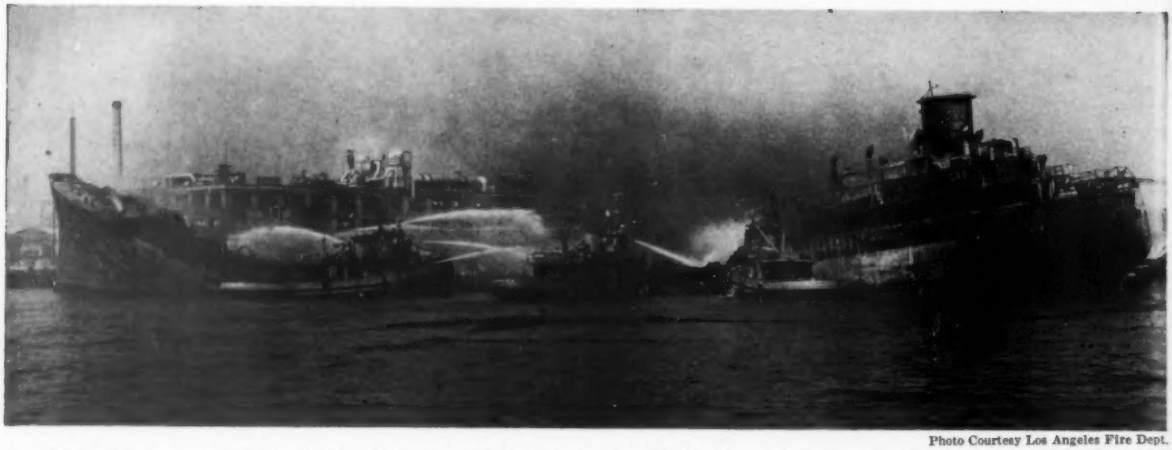


Photo Courtesy Los Angeles Fire Dept.

Her Center Resting on the Bottom of the Channel, the Tanker Markay Lies Blackened and Burned, as Fire Boats and Navy Tugs Extinguish Last Flames

Ship Explosion and Pier Fires Cause Record Los Angeles Loss

Preparedness and Prompt Action of Fire Fighters Prevent Possible Second Texas City

By R. H. WILEY

EDITOR'S NOTE: Following hard on the heels of the tragic Texas City holocaust, the explosion and fire aboard the tanker Markay in Los Angeles Harbor still further demonstrated the post war fire problems, particularly in waterfront concentrations of high hazard occupancies, that pose a continual threat to the nation's fire service.

That the Markay blast and blaze did not become a second Texas City debacle is largely due to the fast and efficient work of the Los Angeles Fire Department, and the cooperation of private and government marine facilities with the fire forces. Even before it took the lesson of Texas City to heart the Los Angeles Fire Department had planned and prepared for such harbor emergencies. Further, the city itself, long ago, had created a Disaster Plan designed to cope with the most dangerous and threatening of catastrophes, of whatever nature.

To the editors, the story of how the Los Angeles Fire Department and coordinating units met the Markay emergency is most interesting. We are indebted to not only the author, Correspondent Robert H. Wiley, who was at the scene in the thick of it, for over ten hours, but to the many officers and members of the Los Angeles Fire Department, particularly Fire Chief John Alderson; Chief Henry R. Boone, Fire Prevention Engineer; Acting Battalion Chief Russell Biegel; Captain L. L. Bice of the Bureau of Fire Investigation, L. A. F. D., and his report of investigation covering the fire, to Captain Carl Halter, Bureau of Fire Investigation (Arson Bureau); Acting Captain C. J. Boston, in charge of the signal bureau in San Pedro and to others who checked and verified the data included.

THE largest fire ever to occur in the vast Los Angeles Harbor area followed a terrific explosion which blew up an 11,000 ton oil tanker early Sunday morning, June 22. The concussion from the blast jarred buildings ten miles away, and huge pieces of steel from the ship's deck were hurled hundreds of yards through the air, damaging adjacent property. The ship, which was being loaded with a mixed cargo of petroleum products, instantly became a roaring, exploding inferno, and great quantities of flaming gasoline seethed out over the surface of the water to ignite piers and docks on both sides of the slip in which the tanker was berthed. Faced with this instantaneous conflagration, the Los Angeles Fire Department mobilized to fight one of the most extensive fires in its history. How well they succeeded can best be judged by the fact that while nearly 3,000,000 gallons of gasoline burned in the concentrated Wilmington Harbor district, the fire was confined to the ship and to dock structures which ignited immediately after the explosion.

The S. S. Markay, owned by the Keystone Shipping Co. of Philadelphia, had tied up at Shell Oil Company berth No. 166 at Mormon Island Marine Terminal at 2 P.M. on Saturday, June 21, and started loading its cargo. It was scheduled to sail the following morning for northern California ports and most of the ship's crew had been given Saturday night shore leave. The ship's complement was 44 men but it is believed that only about half this number were aboard at the time of the explosion. The first mate and three seamen were on deck watch, and several other crew members were on duty superintending loading operations. In addition, an unknown number of men had returned from leave and were asleep in the crew compartments. The Shell Oil Company had six of its dock workers on duty at the fuel loading berth. In the early hours of Sunday morning the sky was clear and a four mile an hour wind was blowing from the north east. The temperature stood at 62 degrees, and the barometer reading was 29.90. The water in the harbor was receding to the low tide level.

At two A.M. the first mate listened to the ship's bell strike mid-watch and entered "All's well" on the log. At 2:06 tank 5, amidship, which was being loaded, blew up with a noise heard twenty miles away. More than a mile from the scene, persons were thrown from their beds and store windows shattered. Sections of the ship were thrown as far as 800 yards and sheared off rivet heads rained down over a wide area.

Crew Members Trapped

Some of the crew members, blown from their bunks by the blast, were able to make their way to the deck and dive into the water, but others were trapped by the heat and smoke and perished in the flames. This writer talked to a seaman a few minutes after the latter had escaped from the ship by going over the side and sliding down a hawser. The seaman said he had attempted to leave by the center companionway and hatch, which were blocked by fire, and he then made his way aft, and escaped from the stern of the ship. He stated that he knew at least nine other men were aboard but he did not know how many of these men had gotten off. One crew member

had left the ship a few minutes before the explosion to go to his car which was parked alongside the dock, and although an enormous section of the deck plate landed within a few feet of the car, and the car was destroyed by fire, the seaman escaped with his life. The stories of rescues and of heroism on the part of crew members and others are too numerous to relate.

Quick Response by Fire Fighters

Over in the San Pedro section of Los Angeles, which adjoins the Wilmington Harbor District, the eight story City Hall, which houses the district signal office and five fire-fighting units, was shaken by the blast. Jarred from sleep, Acting Battalion Chief Russell Biegel looked out across the harbor to see flames mounting skyward for hundreds of feet. He immediately left 6th Battalion Headquarters in the City Hall, followed by Engine 36, a Salvage Company, a Rescue Company, a Fuel Wagon and a Fire Boat Tender, all housed in the same station.

As he left quarters, Acting Chief Biegel contacted the fire alarm dispatcher by radio and ordered all harbor district fire companies to the scene. This resulted in a third alarm dispatch which was simultaneous with the first alarm. Thus the following apparatus immediately started to roll to the fire: 5 Engine Companies, 3 Fire Boats, 2 Truck Companies, 1 Salvage Company, 1 Rescue Company, 2 Fire Boat Tenders and 2 Foam Units. (Note: No foam was used by the Fire Department, although a Navy Tug fighting the fire attempted to use some foam.)

The force of the explosion had blown flaming fuel 500 feet across Slip Number One and had ignited piling along the entire length of the pier opposite the ill-fated Markay. This pier, once used by the N. Y. K. (Japanese) Lines, is now leased to the American President Lines and contained, along its 2000 foot length, a one-story pier shed, 50 feet in height, constructed of steel frame and sheet metal. This dock, which is owned by the City of Los Angeles, is designated as Loading Berths 152, 153, 154, 155 (See Fig. 1). Fortunately it had been almost entirely emptied of cargo due to the fact that a ship had loaded and sailed from this pier a few hours earlier. A night watchman on duty in this pier shed was knocked down when the tanker exploded and before he could regain his feet the fiery gasoline was reaching out toward the pier as from a flame-thrower.

Photo Courtesy Los Angeles Fire Dept.

Powerful Streams of Fire Boat 2 Go Into Operation Along American President Line Docks Immediately After Boat Battled Its Way Up Channel Through Flaming Oil. Tanker Markay Burns Fiercely in the Background

Exposures Threatened*

On the Mormon Island side of the channel the big tanker was completely afire and gasoline-fed flames raged along the Shell Company's docks from berths Nos. 167 to 170. On shore, near the burning ship, were twenty large tanks containing gasoline. Heat from the fire blistered the paint on some of these tanks and it was feared that momentarily they might ignite. Next to the Shell Company is located a large tank storage area of the Texas Company. A barge, loaded with oil tanks, was tied up next to the blazing Markay. This was towed to safety soon after the fire started by a tug which, in face of great danger, moved in to attach lines to the barge. Two sons of Acting Chief Biegel, who had rushed to the fire from their home, dove into the water to carry lines from the tug to the barge.

Burning gasoline completely covered the wide channel and the flames quickly spread upward from the blazing piling to ignite the dock structure of the American President Lines. Adjoining this dock on the north is a similar one used by the Matson Lines. Across the street from the burning pier shed is the property of the Union Oil Company of California, containing gasoline storage tanks, and beyond, across the West Basin, are the extensive oil storage facilities of the Standard Oil Company. All of this huge harbor installation was endangered by the rapidly spreading fire and only the effective efforts of the fire fighters prevented a catastrophe on a much larger scale.

Fast Work by Firemen

En route to the fire, Acting Battalion Chief Biegel, realizing that all available apparatus would be needed immediately to cover the exposures and check the fire, radioed the Los Angeles Fire Alarm dispatcher to send every Los Angeles Company which could be spared to the scene. Arriving first in Neptune Avenue he ordered Engine Companies 53 and 36 to lay lines into the pier shed to halt the spread of the flames. Proceeding then to Mormon Island he directed Engine 49 to lay into the Shell Yard and wet down the dangerously exposed gasoline tanks with heavy streams supplied by pumper. A line with an open butt was placed atop a large tank next to the burning ship, but the water which cascaded down the sides of the tank was turned to steam by the terrific heat.

From its berth on nearby Terminal Island, Los Angeles Fire Boat 2 arrived quickly on the first alarm. Finding the channel completely blocked by blazing fuel, the boat was at first unable to approach the American President Line docks to help check the spread of this

Photo Courtesy Los Angeles Fire Dept.

Los Angeles Firemen Work Feverishly to Move Loaded Butane Cylinders from Blazing Dock Shed as Streams Are Directed on Men and Tanks to Hold Down Heat

*See Fig. 1 for graphic diagram of area and exposures.

fire. Approaching the Markay, the Fire Boat sighted several survivors in the water. Three of these men, who had dived overboard after the explosion rocked the ship, were pulled from the water by the Fire Boat crew, but others in the water were engulfed by burning oil before they could be reached.

Soon after, Fire Boat 2 battled its way through the burning slip, using powerful streams from its turrets to drive back the fire on the water, and took up a position ahead of the fire along the President Line Dock, aiding the land companies in stopping the fire at that point. Fire Boats 1 and 3, which arrived soon after, worked along the pier, directing their streams into the pier shed and piling, but the long structure was quickly consumed by the gasoline fed flames and could not be saved. Nevertheless, this fire was stopped about three quarters of the way from the end of the pier by the combined efforts of land and boat companies. While the dock shed beyond this point was saved, the piling underneath continued to burn and presented the usual difficulty of extinguishment.

With the arrival of additional companies, many long lines were laid to the fire. Adequate water supplies were available and pumping engines supplied heavy streams at all points of operation. Several engines drafted water from the harbor at vantage points along the docks.

In response to the third alarm, Division Commander Floyd J. Adams arrived and assumed command at the fire until the arrival of Chief Engineer John H. Alderson. When the response of companies started from Los Angeles proper, Platoon Commander F. E. Winkler, on duty in Fire Headquarters, answered the alarm, as did Deputy Chief F. H. Rothermel, to assist in the direction of the battle.

Because of the great area of the City of Los Angeles many companies made runs of more than twenty miles in answering the multiple alarms above the third. Although more than 50 rigs and miscellaneous equipment of the Fire Department moved to the fire it is worthy of note that none of the apparatus was involved in any accident, and only one vehicle a 1921 model hose wagon of Engine Company 18, was disabled by a mechanical failure.

Fire fighting crews and employees of the oil companies in the area involved did excellent work and assisted in checking the fire at various points. U. S. Navy and Coast Guard boats which arrived early on the scene aided in keeping the burning fuel from spreading on the water and braved intense heat to play deck guns on the tanker.

Heavy Demands on Fire Alarm Bureau

The alarm situation created by this fire is unique in the annals of fire alarm dispatching. Immediately after the initial explosion, the fire cast a glow in the sky visible for great distances and, as in all such cases, fire alarm circuits instantly were flooded with calls. One minute and a half after the blast occurred aboard the tanker, the San Pedro signal office received four box alarms simultaneously. However none of these boxes was located anywhere near the scene of the fire. One box was located a short distance from the signal office itself, more than three miles from the fire. Acting Captain C. J. Boston, who was in charge of the signal office in San Pedro, said the telephone switchboard "lit up like a Christmas Tree and stayed that way for hours."

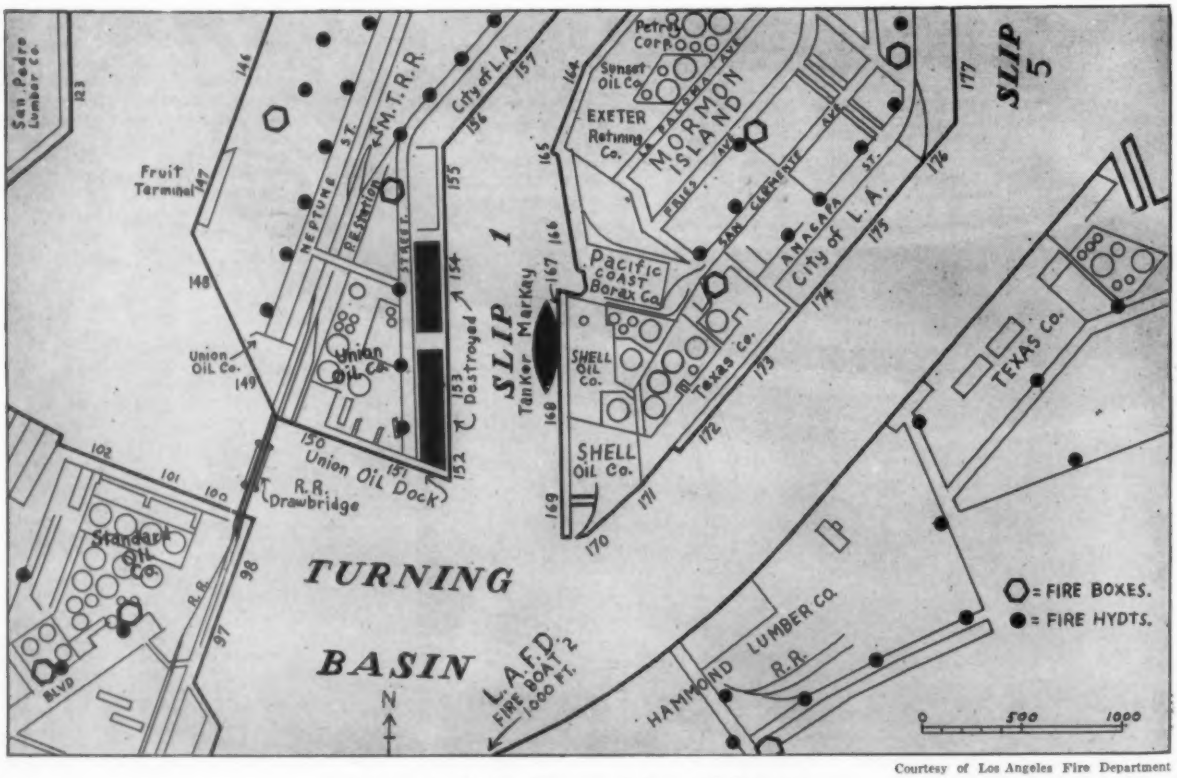
It is interesting to note that the time of transmission of the first alarm was 2:09 and this coincided with the despatch of the third alarm which was called for by the Acting Battalion Chief over the radio at 2:09.

The accompanying table shows the movement of companies and response at the fire. In addition to the equipment listed, the nearby City of Long Beach sent several pieces of apparatus to the fire. Chief Albright of the Signal Hill (oil field city) Fire Department also attended the fire but no apparatus was called from that community.

Radio Aids Firemen

The cars of all Chief Officers of the Los Angeles Department are equipped with two-way radio, as are a number of pieces of apparatus and this means of communication was extremely valuable due to the long distances between the dock areas involved. The fire, which quickly developed into two separate conflagrations on either side of the wide channel, necessitated repeated requests for additional apparatus and ambulances, and practically all of the calls were transmitted from the fire ground by radio.

An emergency evacuation plan which had been devised by the Los Angeles Port Warden, Rear-Adm. Frank D. Higbee, following the Texas City disaster, was immediately put into effect and more than twenty large ships were removed from the harbor either by tugs or under their own power, as a safety precaution. The tanker L. P. St. Clair which was tied up at the Union Oil ter-



Courtesy of Los Angeles Fire Department

Figure 1: Graphic Diagram of Area and Exposures

minal was shifted in less than fifteen minutes after the explosion, while firemen battled to keep the flames from spreading to its berth (No. 150). The Texas Company moved its tankers away from its docks soon after the fire started, and until after daylight big vessels continued to move out of the area to safety.

Technical Aspects of the Fire

The Markay was a comparatively new ship, having been constructed in 1942 at a cost of $3,125,000. The mixed cargo of petroleum distillates consisted of high octane aviation gasoline, ethyl gasoline, a gasoline blend, stove oil, diesel oil, bunker oil and a product known as "butane blend" or "butane tops". This latter distillate is not a completed product but is a gasoline-butane mixture which was to have been further refined upon delivery at its destination. Hold No. 4 had been filled with butane blend and hold No. 5 was being loaded with it when the explosion let go. Altogether 49,000 barrels of this mixture were aboard the ship. The total cargo, consisting of 136,000 barrels, which was the capacity of the ship, had been about 60% loaded at the time of the blast.

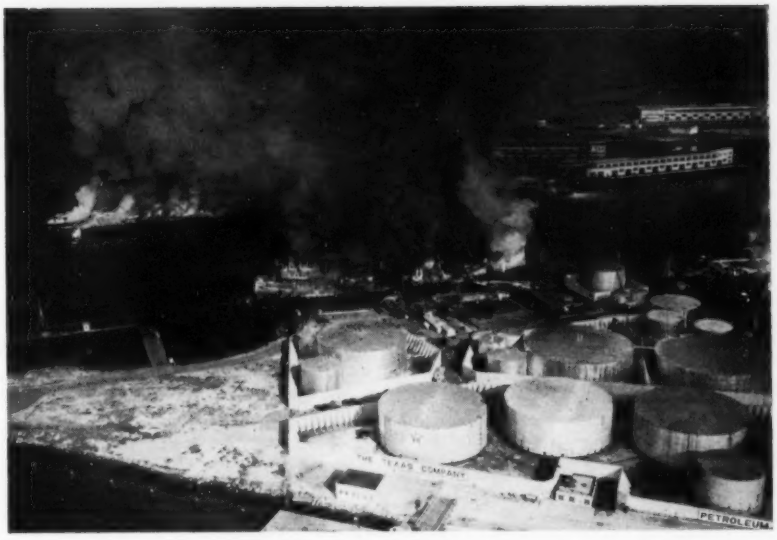
It appears that all safety precautions were taken during the loading operations because of the "hot" cargo and its attendant vapor hazard. Preliminary investigation showed that all fires were out in the galley, the ships ventilators were turned away from the wind, and the boiler fires had been reduced to a point where a head of steam only sufficient to move the ship was maintained. Crew members were required to surrender all matches before boarding the ship.

The ship's master, Captain John H. Torrance, who had taken command of the Markay only fifteen days before disaster struck his ship, was visiting his family's home at the time of the explosion. At a Coast Guard Board of Inquiry hearing he stated that while his ship was en route from Portland, Ore., to Wilmington Harbor he had received a message from the Owner's Agent that the ship's galley would not be used while the vessel was in port at Los Angeles. He did not request an explanation because he was cognizant of the hazard involved in the loading operations, and in accordance with the instructions which he had received, the galley was closed and locked when the ship entered port. He said that the ship's stack had been sparking considerably, but this was not considered to be a significant factor in connection with the explosion because the boiler fires were low at the time.

Cause May Never Be Known—Loss Heavy

The cause of the explosion and fire is believed to have been the ignition of butane vapors. How these vapors ignited may never be known. Some generators were working aboard ship at the time. And it is not beyond the realm of possibility that the ignition of vapors could have been caused from the engine room; or, for that matter, from any area within or outside the ship.

It is not possible accurately to predict the loss from the fire at this writing, although preliminary estimates placed the total damage as high as $10,000,000. Berths 152, 153 and 154, which were owned by the City of Los Angeles, were valued at $1,200,000. The value of the contents of the docks leased by the American President Lines is not known. The Shell Oil Company's dock loss has been estimated at around $300,000 but the value of the Markay's cargo has not been announced. Perhaps a conservative estimate of the over-all loss from the fire at this time would be $6,000,000.



Fire Devastates Harbor Area After Explosion
Black columns of smoke rise from the burning tanker Markay as fireboats throw water on a burning pier across the channel after a terrific explosion aboard the ship. Firemen succeed in keeping the fire away from the big fuel storage tanks in foreground. Note how tanks are diked.

Neither is it known, as this report is written, what the total casualties will amount to. Six are known to be dead (five bodies have been identified) and six persons are still missing. Those missing are believed to be dead and they include four of the oil company's dock workers. Twenty-two men were injured seriously enough to be hospitalized. Some of those most seriously hurt received burns while escaping from the ship or while fleeing from flames which were projected over the loading area by the blast.

The Markay was broken in the middle by the explosion, and the intense oil fire reduced its superstructure to a twisted, melted mass of metal. The center of the ship sank to the bottom of the 34-foot channel and its bow and stern protruded high out of the water. The ship took on the appearance of the vessels in the Bikini Bomb Test, and it appears doubtful that there will be any salvage value unless some of the engine room equipment can be salvaged.

At about seven o'clock Sunday morning, after any danger of further spread of the fire had passed, it was decided in a conference between officials of the Fire Department and the Oil Company, that it would be necessary to allow the fuel still blazing in the hold of the ship to burn off. If this were not done there was great danger that the volume of gases which would immediately form if the fire were snuffed out, would ignite from the super-heated metal in the ship's interior, and that there would be another devastating explosion. Consequently, during Sunday and Sunday night, the Fire Department confined its work on the Markay to preventing the fire, which continued to pour from the hatches, from spreading.

By about nine o'clock Sunday morning all of the San Pedro district land companies, which had been first in at the fire, were released and returned to their quarters, but a large of number of companies which had responded from greater distances and from scattered sections of Los Angeles were retained at the scene, working on the smouldering dock structures and extinguishing the fires in the piling. At 6:00 P.M., Sunday the eight or ten Los Angeles companies which still remained on the scene were relieved by four additional companies which special called from the city, and these relief companies worked on wetting down operations during the night.

Fire Boats 2 and 3 worked at the fire continuously from the time of their response on the first alarm until after two o'clock Monday morning, logging more than 24 hours of fire duty at the scene for each boat. Fire Boat 1, which functioned effectively for many hours at the fire, finally went out of service due to clogging of the cooling system. The surface of the water in the harbor was coated with a heavy layer of cinders from the fire and these cinders, entering the intake valves of the boat's cooling system, caused overheating to a point where it was necessary to take the boat out of service. The extent to which the covering of cinders accumulated on the water can be understood from the fact that several firemen stepped into the water, thinking that the cinder covered surface was an extension of the charred pier flooring.

Several inevstigations of the disaster are under way, including those being made by the L. A. F. D. Bureau of Fire Prevention, under the direction of Chief Henry R. Boone, and by the bureau of Fire Investigation (Arson Bureau), which is headed by Captain Carl Halter. Chief Boone, who arrived

(*Continued on page* 452)

Birmingham Fire Department Finds Radio Profitable

Cuts Down Apparatus Response and Increases Efficiency of Operation

Editor's Note: Short-wave radio continues to grow in popularity and in usage throughout the nation's municipal and other fire services. This expansion has been slowed somewhat by difficulties in getting deliveries, and in the delay and uncertainty over final and definite allocation of radio frequencies by the Federal Communications Commission. Now that that body has assured the fire service it will have frequencies in the channels most favorable for efficient operation of latest type FM installations, and now that manufacturers of such equipment are improving their deliveries and servicing, interest in fire service radio is growing. This is evidenced by the inquiries on the subject being received by *Fire Engineering* and by the data on radio installations and the use of radio contributed by the nation's fire departments, such as the following account of developments in the City of Birmingham, Alabama.

Technical details of the Birmingham installation have purposely been omitted from this story. Those data may be had either by writing the contributor, or the manufacturers of the equipment.

The most interesting factor of the entire Birmingham message, we believe, is this statement from the Fire Alarm Bureau: "It is our opinion that the two-way radio on fire apparatus is the greatest improvement in the efficiency of the fire department since the conversion from horse-drawn apparatus to motor driven apparatus."

The editors are indebted to Chief Radio Engineer, L. C. Kron and Chief Fire Alarm Operator George E. Crossett of the Fire Alarm Bureau for the information upon which this account is based; also to Fire Chief H. R. Smith and Assistant Chief Ayres of the Birmingham Fire Department, to Mr. Eugene Connor, Commissioner of Public Safety, City of Birmingham, and Mr. Ed Jagger, honorary member, Birmingham Fire Department.

THE City of Birmingham, population 267,583 (1940 census) is one of the larger municipalities to make use of fire department radio in a serious way. At this writing the city has equipped twenty-seven of its fire fighting units with two-way radio, and plans to install latest type radio on all remaining pieces as rapidly as possible.

Present installations include six chiefs' cars; equipment of twenty engine companies and one ladder company. Seven additional two-way radio units should be installed by the time this is published. Four of these will be aplied to engine company apparatus which will complete the two-way radio communications for all engine companies in regular service. The other three units will equip the cars of two fire mechanics and one fire alarm repair truck.

Radio Pays Its Way

Evidence furnished by Chief Radio Engineer Kron and Chief Fire Alarm Operator Crossett of the Birmingham Bureau of Fire, bears out the contention made by others, familiar with radio fire service communications, that modern two-way (and so-called three-way) radio is the one outstanding improvement which, when installed in a fire department, can be made to produce a definite financial return on investment. In short, radio is more than a mere efficiency-builder in the business of fire protection and fire prevention—it is an economy measure. It can and will pay its way when rightly installed and used.

In Birmingham, according to the records, many hundreds of miles of travel and consequent expense have been saved by the use of radio. The procedure followed is somewhat similar to that developed in Miami by Fire Chief Henry Chase, and in other cities. This consists in having the first company reporting in at a fire immediately notifying the fire alarm headquarters by radio of the nature of the call—whether it is a fire, or false alarm, and whether or not the first company can handle the situation, or whether more help is needed. This report to fire alarm headquarters may cancel all other apparatus responding, or may turn around certain units, at the discretion of the dispatchers.

In Birmingham, before the two-way radio system was installed, heavy fire fighting equipment was sent several miles across town to fires, which had been extinguished by smaller nearby units before these companies with their equipment had reached the scene. Also, before the use of radio, it was customary to dispatch ten pieces of equipment on assignment to the high value district, embracing the downtown area. Four other units were also automatically moved up or re-located, making a total of fourteen pieces of equipment that rolled on every alarm from that area.

Now, with radio, the department has been able to reduce this response from ten to six pieces of apparatus on the first alarm, and as many of these as

Left: Two-Way F. M. Cruiser Type Radio Mounted on Engine Co. No. 1. Right: Main Transmitter, 1000 Watt, 2382 K.C., Birmingham, Ala.

desired can be cancelled out at the direction of the operators.

Having the company units always in communication, fire headquarters may divert or detour equipment from one response to another, or may direct units to certain locations on the fire ground. In Birmingham, many hundreds of miles alone have been saved by discontinuing all move-ups until a report from the first company arriving at the fire is received.

The city makes profitable use of radio communications in another, if more prosaic and routine, way. Several companies are sent out each day, weather and fire conditions permitting,

Transmitter Building and Tower at Birmingham, Ala. L. C. Kron Is Chief Radio Engineer

to inspect residences and other buildings in the respective company areas. The practice is to place the radio-equipped apparatus in the middle of the block, leaving one man to listen in, while the others conduct their inspections. If a radio call is received that requires the service of the respective company, the watchman sounds the siren and the inspectors return to the apparatus and respond. It is found that this causes but slight delay in company unit response and the results of this procedure have been eminently satisfactory, thus far.

Another detail: just as soon as a company is ready to leave a fire and is in condition to respond to another alarm, it reports in service over the radio. This adds many hours of operating service to company units and permits the company to be dispatched on any other emergency call without waiting for its return to quarters. This procedure also eliminates the response of units that might otherwise have to fill in on the call—some perhaps from a considerable distance. All of which developments can be translated into dollars saved (not to speak of the reduction in accidents to men and apparatus through the curtailment of travel).

In Birmingham, as in numerous other cities where radio is broadly used, should a company be out at a grass fire or other small fire of any nature, and an alarm be received at the fire alarm office, which comes from the territory normally covered by this company, the fire alarm operator informs the company of the call via the radio. If it is possible, as often happens, for the company to leave one man to clean up the situation, the company does so, and rolls to the other alarm.

Frequency Shared with Police

Although Birmingham is of sufficient size to come within the permissible limitations to enable it to own and operate its own radio station, independent of police or other municipal services, the present system is operated jointly with the police department, with one exception: the mobile equipment for the police and fire departments operate on different frequencies. Both use FM transmitters, operating on frequencies in the low end of the 30 to 40 mc band. This use of separate frequencies for the mobile units of the two services permits simultaneous operation, without causing interference to either service. Thus both departments are partially free of the perplexing, and sometimes annoying, problem of which shall have priority, when police and fire share the same radio frequencies.

The main transmitter, which is AM (amplitude modulation), is shared between the fire and police departments. The control is so arranged, however, that when the fire alarm operator operates a "push-to-talk" button on his microphone, the control of the main transmitter is automatically transferred to his dispatching position. This is true even if the police dispatcher should be using the transmitter for police work at the time. It is the practice for the fire alarm radio operator to monitor the police dispatcher, either visually, with a carrier indicator, or with loud speaker, or both, and not to break in on the police signals except when the fire operator considers it advisable.

This moot question of who shall have priority, and the extent to which fire, or police, should have preference

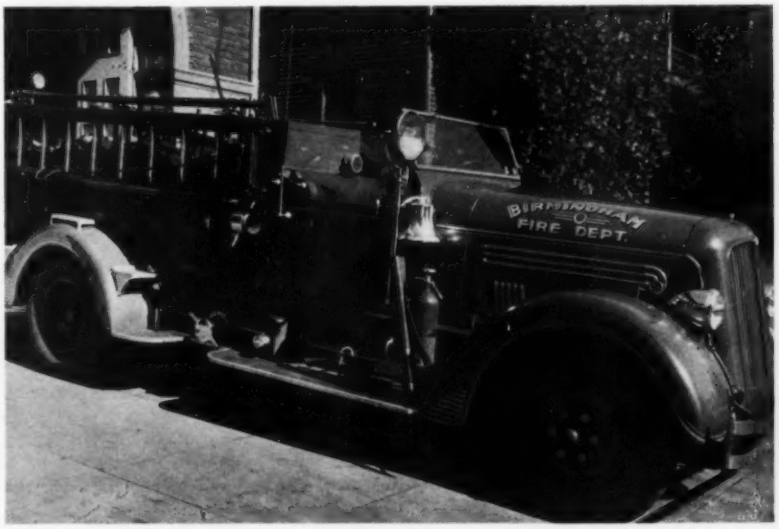
J. R. Smith, Chief of the Birmingham Fire Department Inspects F. M. Cruiser Type Radio

on the air is being weighed by Birmingham radio exponents. Since the mobile units of police and fire operate on different frequencies, the only serious possibility of confusion lies in the joint use of the main transmitter. According to members of the fire alarm bureau who operate the radio system, the present setup is "not too bad an arrangement." Only in the case of a catastrophe, they say, could anyone expect the saturation point for any radio transmitter for either type of work, or service. It is true that simultaneous need for the transmitter will arise many times, but it is claimed in Birmingham that the display of ordinary common sense by the fire alarm operator would determine whether or not the police broadcast should be interrupted. The operators point out that in nearly every case, a dispatch from the fire alarm headquarters is of short duration, usually a terse statement.

Nine in the Radio Division

The radio division employs nine men holding first class radio operators licenses. Three radio operators act as supervisory control operators for the entire radio system. Five radio tech-

(*Continued on page* 452)



Engine Co. No. 1 of the Birmingham Fire Department, Equipped with F. M. Two-Way Radio

Firemen Take No Chances

With the memory of the Texas City disaster fresh in their minds, officials of the New York Fire Department took no chances with the 3,500-ton cargo of ammonium nitrate in the holds of the freighter Golden West when that ship tied up at Pier 17, Staten Island, late in May.

To minimize the possibility of explosion, firemen established a 24-hour guard, with hose lines stretched from shore, ready for instant action.

Coast Guard officials also were on hand to lend their weight to protective measures.

The Golden West, a Maritime Commission ship chartered by the United States Lines, loaded the cargo of ammonium nitrate at Baltimore. The chemical was stowed in two holds, and the ship berthed at Staten Island to load additional miscellaneous cargo, for shipment to France.

Officers of the New York Fire Department left no measures untaken to safeguard the ship and the waterfront area exposed to possible explosion. Safety measures laid down by the department, through Third Deputy Fire Commissioner Nathan C. Horowitz, were all put into effect, and firefighters, Coast Guardsmen dock workers and those of the public who were 'in the know' breathed a sigh of relief when the Golden West pulled out for Brest.

Protectives Elect Officers Between Blazes

Members of the Protectives of Rochester, N. Y., who mix social activities with their duties as volunteer property protectors and who, we're told are known to the trade as "buckets," broke away in a hurry from their annual banquet table to answer an alarm of fire. They returned in record time, after doing their duty, to finish their turkey and trimmings, and to elect officers for the new term. These were: Wm. Scott, president; Glenn Bancroft, vice-president; Gilford Hondorf, recording secretary; Curtis W. Baker, financial secretary; Edward E. Ott, treasurer and Eugene C. Dill, captain.

Battalion Chief Clarence Norman of the Rochester Fire Department, a diner at the affair, also left his turkey to direct the fire fighting operations—and returned as promptly to clean his plate!

WROUGHT IRON FIRE CURTAINS PROTECT LONG RAILROAD PIERS

Dry Pipe Sprinklers to Prevent Extension of Fire by Conduction

EARLY in 1945, two fires virtually destroyed a railroad produce pier and a government ship-loading platform in the Hampton Roads, Virginia, waterfront area.

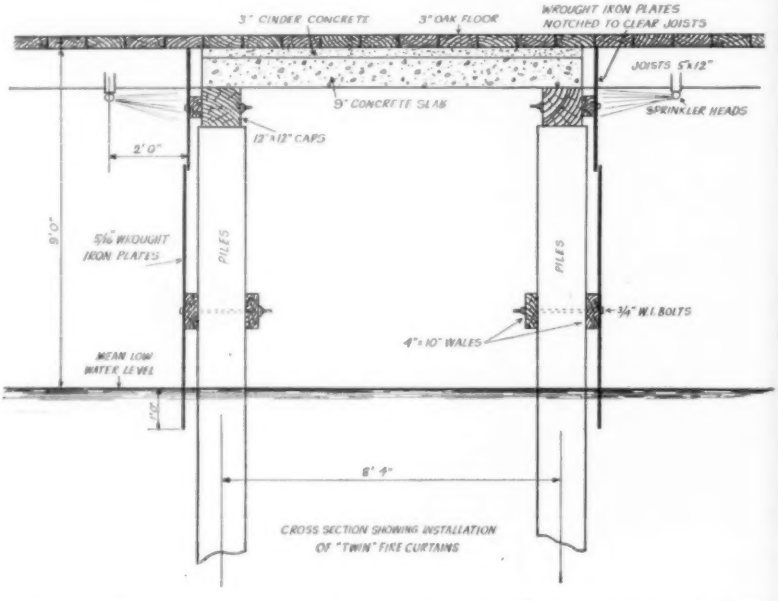
In both cases, the fires started below the decks and spread almost the full length of the piers before breaking through the floor level.

Norfolk and Western Railway recently installed measures designed to prevent similar below-deck spread of fire at their Lambert Point, Va., Piers "L" and "S." This protective equipment consists of twin wrought iron plate firewalls, supplemented by manually operated sprinklers, below the decks of the piers.

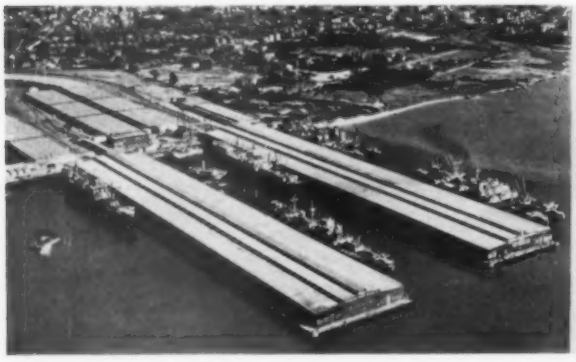
Pier "L" is 1,195 feet long, 207 feet wide, with an 18-foot apron on both sides. Three railroad tracks serve the pier, one on the south apron and two (depressed) extending through the center of the shed. Pier "S" is 1,200 feet long, 207 feet wide, with a 7-foot apron on both sides, and carries four depressed railroad tracks through the center of the shed.

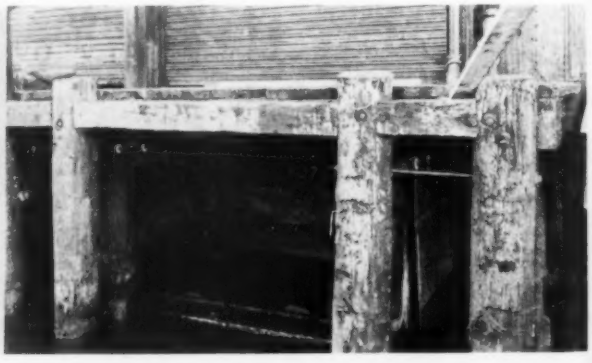
Both piers were built in 1916 on timber piling with 3" wood floors. The sheds have steel columns and roof trusses.

When the piers originally were built, reinforced concrete firewalls were installed below decks but severe tidal action and corrosive industrial acids and salt water rendered several of these walls useless.



CROSS SECTION SHOWING INSTALLATION OF "TWIN" FIRE CURTAINS





Left: Aerial View of Norfolk and Western Railway's Piers "S" and "L" on the Elizabeth River at Lambert Point, Va., which Are Protected Against the Spread of Fire below Decks by Wrought Iron Fire Curtains. Right: Side View of the Pier Shows, in the Background, an End Wrought Iron Plate That Makes the "Twin Fire Wall" Virtually a 10-Foot Wide Chamber

The newly installed wrought iron fire curtains were fabricated of ⅜" plate. They extend the entire width of each pier, spaced at intervals of approximately 300 feet along the length of the piers. The plates are notched to clear joists and stringers. Not more than ¼" clearance was allowed between the timber and metal. There is a 4" clearance between the firewalls and the timbers to which they are bolted with ¾" wrought iron bolts.

These walls are unique in that they constitute a double curtain of protection since there is approximately a ten-foot space between the vertical wrought iron plates. The ends of each firewall, at the sides of the pier, were closed by additional wrought iron plates, thereby forming virtually a sealed chamber eight feet wide. The area over the top of each chamber is covered by a 9" concrete slab over which is a 3" layer of cinder concrete topped by 3" oak flooring. The firewalls are flush with the flooring and are on the outside of the supporting piles.

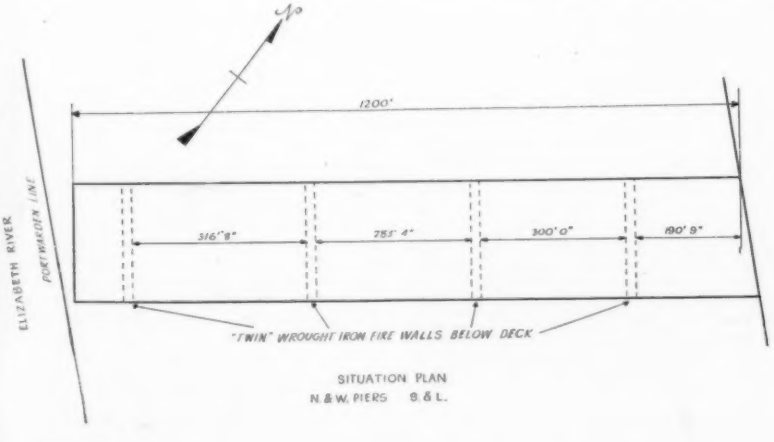
Both faces of each double curtain firewall are protected by open sprinkler heads, spaced five apart, two feet away from the wrought iron plates. These will provide a spray of water for the plates, which would prevent heat transfer through the plates to the supporting piles. Also they give sprinkler protection to the flooring.

Sprinklers for the fire curtains are on 4" mains supplied from a 10" overhead main running through the pier shed. A 100,000-gallon elevated tank is used in connection with the water supply system. At the end of each 4" main there is a plug connection for fireboats to pump into the system.

Mean water level in the Hampton Roads area is about nine feet felow the pier decks and the wrought iron fire curtains extend about ten feet below the decks so that they will be partially under water at all times.

Wrought iron was selected as the material for use in this service because of its durability and resistance to the corrosive attacks of salt water and salt water air.

Design of these firewalls was supervised by W. P. Wiltsee, chief engineer of Norfolk and Western Railway; construction was supervised by J. Y. Neal, assistant engineer of N. & W., at Norfolk, and the installing contractor was John P. Pettyjohn & Co., Lynchburg, Va.



SITUATION PLAN
N.&W. PIERS 8 & 9

Two Firemen Killed in Motorboat Blast

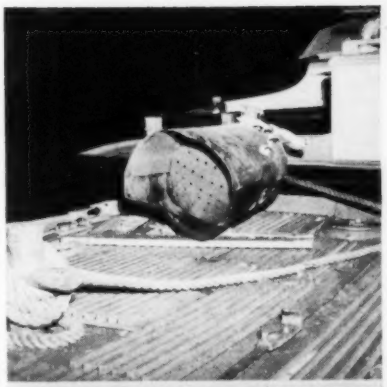
Two members of the New York City Fire Department were killed and nine other persons, including a fire captain and lieutenant and six firemen, and the captain of a volunteer "fireboat", were injured when the gasoline tank of the burning cabin cruiser "Tipsey" exploded on the night of June 17 and flew through the air to crash into one of two small motorboats taking firefighters and police out to fight the fire on the blazing cruiser.

The burning craft was anchored about 1,000 feet off Whitestone, Queens. The cause of the fire is unknown. First notification was given the police at 9:16 P.M. They immediately notified the fire department, which sent out signal 5-7—6244 which brought Engine 295 and Ladder 144. Firemen were helpless to reach the burning craft without a boat and quickly took advantage of the offer of boat captain Arthur Hubig of Whitestone, to ferry the forces out in his motorboat. Police, meanwhile, set out in a small police launch. Firemen took with them tools and extinguishers.

As the improvised "fireboat" approached the Tipsey the latter blew up and its gasoline tank tore into the small deck house of the rescue craft, maiming and burning all hands in the cubicle.

Captain Hubig, skipper of the little boat, was pierced in the abdomen by a fragment of glass. Fireman Fred Ziegler, 32, and William D. Austin, 36, both of Ladder 144 were so badly injured that they died shortly, after being taken to Flushing Hospital. Others removed to Queens General and Flushing Hospitals were, Captain George Behringer and Firemen Julius Boertlein, Richard Harley and P. F. Gerahty of Engine 295 and Lieutenant Henry Schmidt and Firemen Louis DaRos, Al Nnrath and W. C. Hugill, all of Ladder 144. Of these, Lieutenant Schmidt was the worst injured, although several of the other victims were reported on the danger list.

At 9:20 P.M. the fireboat Thomas Willett was called along with Ambulance 2 and fire department Doctors Blum and Nilsen. Battalion Chief Klein was initially in command on the '5-7'. Others who arrived soon after the blast were Assistant Chief Hennessy; Deputy Chief in Charge Loftus, and Chief Richard Burke in charge of Brooklyn and Queens.



Ray Hellriegel Photos,
Courtesy New York Fire Department

Top: Explosion of This Tank Killed Two New York Firemen. The Gasoline Tank of the Launch "Tipsey" on the Deck, Following the Blast Which Partially Wrecked an Improvised "Fireboat", Killing Two Firemen, Injuring Nine Others.

Bottom: Wrecked Cubicle of the Improvised "Fireboat". Owner of This Small Craft Volunteered to Transport Firemen to Blazing Launch "Tipsey" Off Whitestone, Queens, Only to Be Badly Injured Himself When Exploding Gasoline Tank Crashed into "Pilot House", Killing or Injuring Almost Everyone on Board.

The explosion threw some of the firemen and policemen into the water but they were quickly dragged to safety, and small fires started on the two converging launches were quickly extinguished.

The unexpected accident, coming like a bolt of lightning during what appeared to be an insignificant fire, has caused some concern among fire forces along Long Island Sound and other metropolitan waterways where there is a heavy concentration of gasoline driven motorboats.

Warren County Organizes

Warren County, Penn., firemen have organized the Active Volunteer Firemen's Association for the purpose of improving the general standards of the county's fire fighting equipment, facilities. Plans are also under discussion for a county fire school, first-aid training and a mutual aid program.

The president of the new organization, which met in May as the guest of the Clarendon Fire Department, Clarendon, Penn., is L. L. Johnson; vice president is H. W. Walchli and the secretary is Gurney R. Ball.

PLIGHT OF AUSTRIAN FIREMEN IN POST-WAR FOOD CRISIS

Burdensome Extra Duties Plus Short Rations Make Conditions Extremely Severe

By Maurice M. Clement

Former Lt. Col. AUS and Fire Marshal US Forces, Austria

RECENTLY the "Fire Chiefs' News Letter" carried an appeal by the chief of the Vienna Fire Brigade, Josef Holaubek, for food to be sent to the firemen of Vienna.

Perhaps many who read that appeal wondered just how valid it was—how urgent the need. I know from past experience that even if one is convinced of the urgency of an appeal, the great distance between us and those who are suffering somehow dulls the magnitude of the situation and our own personal problems soon chase the matter from our minds.

I have just returned from Vienna, after serving there with the Army occupation forces for almost two years. I know Chief Holaubek personally because my work dealt exclusively with fire safety, both Austrian and U. S. military. I have seen the food situation as it affects the people of Austria.

Do they need food?

Here are the facts.

The firemen of Austria are so hungry that I don't see how they have been able to carry on their arduous labors as well as they have. After 22 years of fire safety experience I think I know a good job when I see one, and they are doing a good job.

The firemen work 24 on and 24 off. Their days are spent at demolition work, rescue work, drills and training and fire fighting. Unlike many American firemen they have little time to spend in the squad room, except after their scanty evening meal, and they soon tumble into bed, completely exhausted.

Vienna was about 40% damaged, Linz about the same and Salzburg slightly less, and while rubble removal is not one of their functions, demolition of unsafe structures *is* their job. Every storm causes the collapse of one or more unsafe buildings, many of which are occupied because of the acute housing shortage. That means hours and often days of back-breaking work digging out victims. Even well fed firemen can take only so much of that, because it is a tough grind even under the best of conditions.

I have seen the Vienna firemen, on a big worker, so exhausted after the first half hour they could hardly lift a charged hose line to move or advance it.

Before Christmas, 1946, the daily basic food ration in Austria was 1200 calories, at a time when the ration in Germany was 1550 calories. Contrast that with approximately 4000 calories consumed by American firemen.

In December, 1946, the ration was raised to 1550 calories, *but the allowed foods were not always available.* True, the firemen are classed as heavy workers and receive a little more than the basic ration, but not quite enough to raise them out of the semi-starvation class.

Some Americans do not quite understand where Austria stands in the European political picture. Several friends have told me they hesitated to send food to Austrians because they considered that nation in the same category with Germany. That reasoning is in error. Germany is a conquered nation. Austria was overrun by the Germans. By means of propaganda and brass knuckles the Austrians were kept in line. Now Austria has been liberated and the United States Government is committed to a policy of helping Austria become once again a free and independent nation.

During my stay in Austria I went out of my way to penetrate beneath the surface. This brought me into contact with people in every walk of life, from the Buergermeister of Vienna (Mayor) Theodore Koerner, and various national officials, down to laborers, and including business and professional men and workers in many lines. My contacts have led me to certain conclusions; 1. The Austrian people are not like the stolid, meticulous Germans. They love music, gaiety and art. They are clean and industrious. The home and home life, at all levels, even under the unbelievable difficulties of present day living, are fine and solid. In politeness and courtesy they are on a par with any people in the world. They are thoughtful and kind. But they do not drive themselves as we do. Life is more leisurely than in the States. 2. Politically they despise communism, though they make the common European mistake of injecting their children onto the political stage. Their intense dislike for communism, freely mentioned in "safe" company, was amply proven by the results of the elections (honestly held) in November, 1945, when the communist party polled a meagre 5% of the Austrian vote. 3. The Austrian people hold the United States in very high regard, because they have long been aware of the humanitarian motives that prompt our interest in the recovery and rehabilitation of all victims of the war if a stable world is to be achieved, and because they have seen tangible proof of this in the stand taken by General Mark Clark and in their personal contacts with U. S. personnel stationed in Austria.

Morale High

Only two things are responsible for the sustained high morale of the Austrian people. First, because of the fine qualities they possess inherently, and second, because they love freedom and entertain the hope that through the good offices of the United States they will be assisted out of starvation and misery until they can become once again a free nation among nations, its autonomy unimpaired, the threat of communism removed and a peaceful existence in view.

In all of Austria there are only six (6) paid fire departments. Two of these, Graz and Klagenfurt are in the British zone. One, Innsbruck, is in the French zone. Two, Salzburg and Linz, are in the U. S. zone. The sixth, Vienna, is occupied by the Big Four nations. (In Vienna, the Inner Ring is international, and the rest of the city is divided into four occupation zones).

In the rest of the nation, (Austria is about the size of North Carolina and has a total population of about 7 million people) there are approximately 1300 fire brigades, all volunteer.

These men have many problems, of course, but the chief problem with which we need concern ourselves is food for the *paid* firemen. In Vienna there are 1040 paid firemen. In Salzburg the number will perhaps not exceed 80 men, while in Linz the total is about 70. I do not have figures for the other three cities, but 300 will certainly cover all three. That makes less than 1500 paid firemen in all of Austria.

Ordinary parcel post packages to Austria are at present restricted to a weight of 4 pounds, 6 ounces. This is necessary because of transportation difficulties in Austria and the inability of Austrian postmen to carry heavier burdens. But I believe a higher weight allowance is permissible for relief packages.

Those who would like to forward food to Austrian firemen can use a definite mailing address on the packages, i.e., either of these three fire chiefs;

Branddirektor Josef HOLAUBEK
VIENNA, I.,
Am Hof 10
AUSTRIA

Ing. Josef BEHENSKY
Salzburg Feuerwehr
Residenz Platz,
AUSTRIA

Hauptmann Adolph TRIMBACHER
Linz Feuerwehr
AUSTRIA

For the firemen of Innsbruck, Graz and Klagenfurt, packages will have to be addressed merely to the Fire Chief, without using a name, for although I have met these men on several occasions, their names escape me at the moment. Address your packages as follows:

Feuerwehr Kommandant
Stadt (name of city)
AUSTRIA

Your post office will be final authority as to the necessity for any special markings on the outside of the package, but it will be well to put a slip of paper inside the package containing your name and address and one sentence stating "The food in this relief package is for the firemen of (name of city)."

There are many commercial organizations that make a business of forwarding food packages overseas. Use these services if you prefer, but it will cost you less if you buy and pack your own, with one possible exception. One organization, the Cooperative for American Remittances to Europe, popularly known as C.A.R.E., is a non-profit group that has been delivering surplus Army 10-in-1 food rations at a cost of

(*Continued on page* 454)

Dubois Rescue Truck After the Fire

Dubois, Pa., Fire Apparatus Destroyed in Fire

Undismayed, members of Volunteer Hose Company No. 1 of the Dubois, Penn., Fire Department are making plans to reorganize following a destructive fire which swept through the Hose Company's portion of the Municipal Building, causing damage estimated at $20,000, of which approximately $10,000 was suffered by the fire company.

The fire, originating from some unknown cause, was discovered coming from the rear windows of the Municipal Building. Firemen, summoned by the whistle shortly after 9:00 A.M. braved intense heat to successfully remove the ladder truck, pumper and ambulance from the burning structure. Because of the heat, this apparatus was towed out and, although scorched, the trucks remained in service. The company's prized emergency rescue equipment, however, was virtually destroyed. According to a report to FIRE ENGINEERING from K. W. Barraclough, president of the company, one truck was completely destroyed and $1,000 damage was done to the emergency truck.

Fire Chief William Reig was in command and firemen, despite the handicap of having to rescue their equipment, were able to place two heavy streams and two booster streams into operation, saving most of the upper part of the building. Two firemen were injured, Blair D. Flick and Bob Clark, both members of Fourth Ward Hose Company.

According to Barraclough, the lighting truck and all its equipment valued at $7,000 was destroyed, with it a newly installed public address system, together with an "iron lung" and various first aid equipment. The Hose Company had spent more than ten years building up its rescue emergency service. Plans for construction of a new building for the fire company had been under consideration for several years.

Howell Township Has Active Department

Outstanding among township fire departments is that known as Howell Township Fire Company No. 1 whose headquarters are located at the little village of Adelphia, a few miles outside of Freehold, N. J.

As so often happens, this unit came into being following a disastrous fire. On a foggy evening in November, 1926, the house of C. H. T. Clayton, one of Adelphia's leading citizens, was burned to the ground, largely due to the fact that Adelphia had no fire protection and the nearest fire department was five miles distant.

Following the fire, on February 2, 1927, Mr. Clayton and other leading citizens held an open meeting in the K. of P. lodge hall where was born the idea of a township fire force. The organization took definite form at a second meeting on February 9 with the name of Howell Township Fire Company No. 1, and Mr. Clayton was elected president. There were 69 charter members.

In its early days, the company encountered the usual problems of getting funds. This handicap was overcome by energetic promotion in which the members raised funds by soliciting donations, holding dances, cake sales, fairs, suppers and so on. Today the organization is independent, financially, and has no governing body control.

On July 3, 1927, the company placed in service its first piece of apparatus, a new G.M.C. with Foamite-Childs equipment. That year, too, on October 25, the Ladies Auxiliary was organized.

On January 21, 1928, the G.M.C. and "Aunt Martha" (the pet appellation for the converted hearse which was used as a supply car) were located in the newly constructed fire house which, incidentally, is today Adelphia's largest structure.

During 1927 there were three fire calls and history fails to tell the fire losses. In 1928 the number had jumped to twenty-four. It has steadily increased to reach the total of seventy-nine for the year 1946.

The next unit purchased was a pumper with a 300 gal. Hale pump. This was placed in service in March, 1932.

On October 10, 1936, the company suffered a great loss in the sudden death of its President and founder, C. H. T. Clayton. His son, C. Ensley Clayton succeeded his father as president and today holds that position.

A new Mack pumper gladdened the hearts of the volunteers in February, 1941. This was a 500 G.P.M. piece, equipped with Hale Pump and a 400 gal. booster tank. With its latest companion unit, a 1944 government surplus, standard make pumper, added about a year ago, the Howell Township Fire Company won first place among units from sixty communities in the Freehold Fire Department's Diamond Jubilee parade, on June 28 last.

The acquisition of the government unit was due to the efforts of Col. Edward L. White, formerly chief, protective property division, U. S. Office of Civilian Defense, Washington who, following his retirement from that agency, became a resident of Adelphia and since, doing so, has shown a lively interest in

Members of Howell Township Fire Company No. 1

the progressive development of the Howell Township Company.

The Company has earned an enviable reputation for quick response to calls and for efficient fire fighting procedure. It is not an unusual occurrence to answer an alarm at ten to fifteen mile distance. In one particular instance a fire ca l was telephoned to the Company, the alarm sounded, trucks manned and driven nine miles in ten minutes from the time the 'phone call was terminated.

Located as the Company is in the heart of the prosperous Monmouth County farming district, interlocked with highways, it was necessary to have a traffic control system. Seven members of the Company have been sworn in as Fire Police by Howell and neighboring townships. This group of men make bold claim to being, the most active volunteer Fire Police volunteer unit in the entire state. Their coverage of main intersections helps materially to further speedy, uninterrupted response of fire forces in answering alarms.

In the seventy-nine cal's answered during 1946 seventy currently listed active members engaged in over 3,300 man hours of fire fighting.

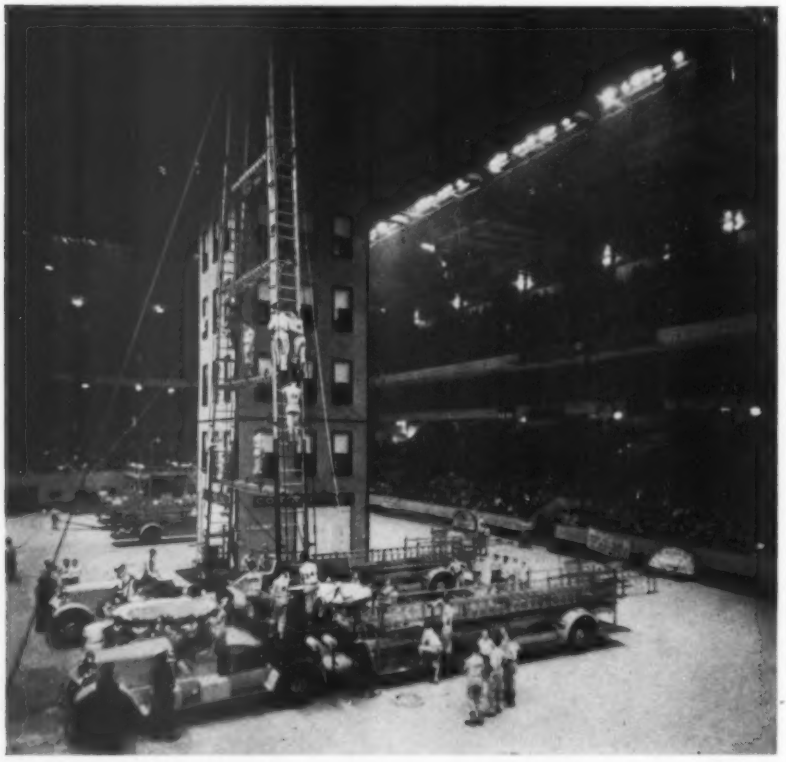
Pacific Coast Fire Chiefs Present Badge to James F. Byrnes

A delegation of Pacific Coast Fire Chiefs, while in Washington, D. C., attending the President's Conference on Fire Prevention, called on and presented to James F. Byrnes, former Secretary of State and wartime Director of Mobilization and now a practicing attorney, a membership badge of the Pacific Coast Association of Fire Chiefs in recognition of services he rendered the Association in securing deferment of firemen from military service during World War II. Shown above is Chief John Alderson, of Los Angeles, pinning the badge on Mr. Byrnes.

National Board to Be Host to I.A.F.C. Convention Visitors

Members of the International Association of Fire Chiefs will be honored by the National Board of Fire Underwriters at a special cocktail party at the Hotel Pennsylvania on Wednesday afternoon, August 20, it is disclosed by the General Committee in charge.

This is the afternoon of the evening on which the delegates will attend the spectacular "Midnight Alarm" at the Madison Square Garden, as guests of the New York Fire Department.



"Midnight Alarm" Will Thrill I.A.F.C. Delegates

Members of the International Association of Fire Chiefs attending the New York City Convention in August will be guests of the New York Fire Department at a night showing of the dramatic spectacle, the "Midnight Alarm" in the huge Madison Square Garden.

This page from the fire annals of yesterday includes mirth, music and melodrama, terminating with a fire in a full-scale four-story old-style tenement, and a thrilling drill by Probationary Firemen of the New York Fire Department.

Mingo Junction Adds Radio

Mingo Junction, Ohio, boasts two-way radio on its No. 1 750 GPM pumper, according to Fire Chief Joseph A. Grantonic, who heads that community's fire forces.

The installation was completed by Ralph Villers, radio technician of Steubenville, Ohio, and permits continual contact between headquarters, whose call letters are WEMX, and the police cruiser car 51, which is also radio-equipped.

The improved system provides instant communication between the fire ground and fire headquarters, facilitating the dispatch of additional men and equipment, calling for outside aid and withdrawing of men for other emergencies and other unforseen incidents.

Twenty-one men in the fire and police departments have passed the radio telephone operators test as required by the Federal Communications Commission.

The Mingo Junction Fire Department has two pieces of equipment, one of which is kept in reserve. The regular fire department consists of three regular drivers, and Chief Grantonic, and over thirty volunteers.

Correction

In the item announcing the appointment of George Geller as consultant to the California State Hotel Association, on Page 394 of the June issue of FIRE ENGINEERING, Mr. Geller was unintentionally listed as a former battalion chief. Mr. Geller retired from the New York Fire Department as a deputy chief.

The WATCH DESK

Overhauling the firemanic news of the day

by ROI B. WOOLLEY

Patrolman Killed in Odd Fire Crash

A New York traffic patrolman, William O'Brien, 43, was killed and four other persons were injured in an accident involving a fire engine, a poultry truck, a bus and a taxi.

Collision occurred at Seventh Aveune and Thirty-first Street, Manhattan, shortly before Mexico's President Aleman was scheduled to arrive at nearby Pennsylvania Station. Officer O'Brien, in middle of this intersection and hearing Engine I approaching Seventh and Thirty-first, attempted to stop traffic to give firemen the clear road. The bus and taxi, both going south, stopped on signal but the poultry truck, heading north, failed to stop. The pumper struck the rear of the truck, spun it around, knocking Officer O'Brien twenty-five feet beneath the halted taxicab. As the truck spun it banged into the bus which in turn hit the taxi.

* * *

Teamwork Pays Dividends

The Good Neighbor Policy, which has long existed between the Brothers of New York and of satellite cities on its Westchester County border, triumphed again when a fire in a one-story frame building in the yard of the Mount Vernon Contracting Co., two blocks from the Westchester County line, flared up. Passers-by turned in alarms which brought both the Mount Vernon Fire Department, Chief John Gibson, and the Bronx brothers, with Capt. George Bridgman, first-due officer in charge.

Chief Gibson's men arrived first, hooked up to a Bronx hydrant, but no soap. The hydrant was inoperative. Undaunted, they hiked back into Mount Vernon, stretched 2,400 feet of hose, and poured water on the blaze. As the fire spread to an unoccupied building, Bronx firemen arrived under Deputy Chief Dan Deasy, and a second alarm was sounded.

The Mount Vernon Brothers politely inquired if they were intruding, and did the Big Brothers wish 'em to hightail out o' there?

"Not at all," was the reply. "You take the Provost Ave. side and we'll tackle the 233rd St. side." The Bronx smoke-eaters hooked onto a more cooperative hydrant and soon the fire was knocked down. No one was hurt—not even a fireman's sensitive feelings.

* * *

The Devine Tradition

In Cincinnati, Ohio, the Devine family has been traditionally a firefighting family. And the tradition of the fire service was never more dramatically expressed than when, late on a Monday, Engine 7 of Mount Washington (a Cincinnati suburb) in command of Fire Lieutenant Mark Devine, responded to box 9235, that was struck by the "Tower" (fire alarm headquarters) after receipt of a telephone alarm for a fire in a residence at 6519 Waldorf place, Mt. Washington.

On duty at the time were two brothers and a brother-in-law, Wm. Mohr. Other members of the firefighting family are Joseph Devine, Sr., retired fireman, an Uncle, Marshal Joseph Devine, Jr., Superintendent of the Fire Prevention Bureau, and Capt. Jerry Devine of Engine 36.

Lieutenant Devine found the fire to be in his own home. His wife Christine who had left home for only a few minutes had returned to find a fire in the bed covering where an invalid son, Nickie, had been playing with a cigarette lighter. She attempted to smother the fire with bed clothing but it was too late to save her son's life.

Lieutenant Devine and sorrowful fellow firemen quickly controlled the fire which did only estimated damage of $50. But despite all efforts Nickie couldn't be saved. (Thanks Pat Holz)

* * *

Cow's Kick Causes Pain in the Ledger

One for the book is the story of how Mrs. O'Leary's cow has caused Uncle Sam no end of bookkeeping—that is, if she really set off the great Chicago fire in 1871 by hoofing the lantern.

The U. S. Treasury, in reporting the value of paper currency in circulation for the month of February, 1947, at $26,927,777,931, disclosed that for 76 years it has carried on the books an even $1,000,000 in bills of unstated denomination, marked as unknown, destroyed.

The department believes bills in that amount were destroyed in the Chicago fire when a Treasury substation burned. But since it isn't definitely known, the amount still is carried on the books.

It all goes to show, Theresa, just how far-reaching a fire can be!

* * *

Fire House "Fire Sale"

Red-faced city officials of Kansas City (Mo.) are attempting to get back the city's No. 4 fire station which was 'inadvertently' sold on January 21 last at a sheriff's land trust act sale of property for $4,497 to the Lonie Chevrolet Co. of Ashland (Neb.).

At the time of the sale, the property was listed as "delinquent in city, state, county and school tax payments" but how it got onto the tax books and was put up for sale has everybody in a dither.

Meanwhile the station located in the southeast residential district, still in use by firemen, continues to receive fire alarms and 'do business'. (Thanks to John Waas, Kansas City and G. W. O'Connor, Mt. Kisco, N. Y.)

* * *

Hot Off the Tape

Three Rensselaer County, N. Y., communities have a special headache: A fire destroyed a Boston & Maine Railroad baggage car, and with it a pouch packed with state income tax returns mailed from the communities just before the deadline. . . . In Pittsburgh, Dave Harvey, a man who doesn't like to be disturbed, got rough with firemen who broke into his home to extinguish a mattress fire. They woke Harvey out of a sound sleep. "Don't squirt water in here!" yelled Harvey, rushing the firemen. The irate snoozer got sixty in the hoosegow to do some real sleeping. . . . In Decatur, Ill., a streak of fire raced G. R. Wolfe's car down the street and caught it after half a block chase. Gasoline, leaking from the car's tank was ignited. Firemen did their stuff—damage only $15. . . . Firemen of Newburyport, Mass, had no trouble getting their new $17,000 aerial ladder into the central fire station, but they couldn't get it out again because the doors opened inward———. . . . In Pueblo, Colo., when the pastors of two churches were on the way to conduct Easter Sunday services they were informed that their homes were on fire and services in both instances were delayed while the clergymen assumed the duties of fire fighters. . . . Charles J. Connelly, 43, a DeWitt, N. Y., volunteer fireman, was killed when he attempted to board a fire truck in response to an alarm and fell beneath the wheels of the moving vehicle. . . . In Detroit, Willie Senters, 25, awakened to find his mattress on fire. He tried to shove it out of a first story window but it stuck. Whereupon Willie backed up, took a short run and lunged at it again. The mattress stayed stuck—but Willie did a Steve Brodie out the window and down 15 feet onto a basement stairway. Firemen doused the blaze, hustled Willie to hospital. (Thanks to the score who sent in this item.). . . . More than 200 persons attending a movie in the Cameo Theatre, Mt. Ranier, suburb of Washington, filed to street without panic when flames swept projection booth. Firemen from Mt. Ranier, Hyattsville, Riverdale, Edmonston, Brentwood, Colmar Manor and Cottage City all responded! . . . Mrs. Elizabeth Bearup Tyre is in Waterloo Memorial Hospital (Auburn, N. Y.) suffering from burns. She hopes to be out of the hospital in time to celebrate her ninety-third birthday. She got that way from smoking in bed—and a pipe of all things! Says she'll continue pulling at her pipe—but not in bed. . . . In Newark, N. J., in response to an urgent phone call, two patrolmen left their prowl car, commandeered a fireboat (that's the way the errant press said it) and chugged several hundred yards offshore to a row boat in which a man lay prone. They aroused Felix Mankowski—who was suffering from nothing worse than spring fever, and declined to be rescued! . . . Washington's (D. C.) first fireworks injury of 1947 was reported April 13, last, when 11-year-old David Benton suffered powder burns when he set off a fountain-type display. Police said sale and use of fireworks and sparklers are legal in the District. (Thanks, Irv. Johnson.) . . . From North Chicago, Ill., comes sad story of a sad day in the firehouse. While firemen were fighting a morning blaze, their lunch burned. During the afternoon they were called out for another two-hour fire battle—and again their meal burned up. So were the Brothers, who finally got their vittals about 7:00 P.M. . . . In Pittsfield, Mass., Arthur Clark dove into a snow bank and escaped with slight burns when his clothing became ignited as he was trying to thaw out his automobile crank case with a blow torch! (Thanks, F.B.). . . . From Pewaukee, Wis., we learn that the Seeman's Recreation Parlor is debating the advisability of requesting the local vamps to set aside 8:00 P.M. each day for its particular use. At exactly 8:00 P.M. Thursday and Friday, the vamps were called to Seeman's to extinguish small blazes caused by defective wiring. (Thanks, Robert Barber, Waukesha.)

Short Cuts and Gadgets

A HOOK-UP TO SAVE TIME?

From Irvin A. Kritzell of the Freemont, Ohio, Fire Department comes the following idea for a time-saving hook-up which we pass along to our sharpshooters for comment or criticism. Reader Kritzell writes:

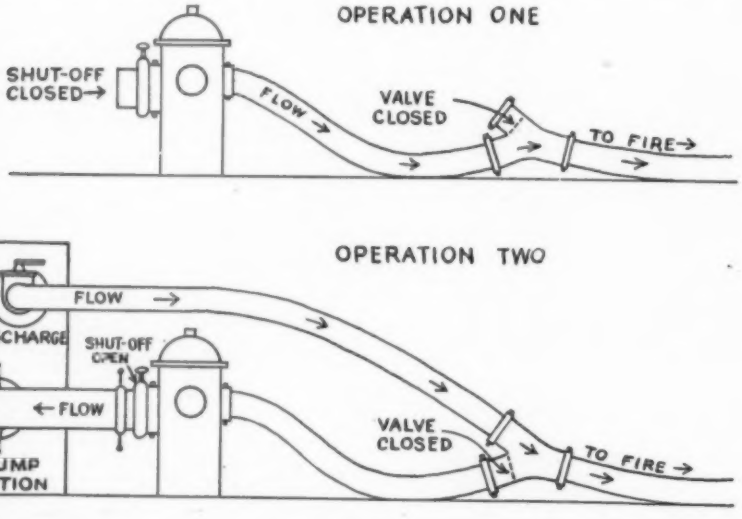
"The majority of fires are fought by booster lines. At all fires booster lines are backed up by a large line, usually 2½-in. Often, due to shortage of manpower or apparatus, the 2½-in. line is hooked directly to the hydrant (not to pumper). Sometimes hydrant pressure or water supply is insufficient to control the fire, or no other hydrants are available to stretch extra lines if needed. Then it is necessary to shut down the hydrant, exhausting the supply of water to the 2½-in. line, until a pumper can be connected to the hydrant and water once more be supplied. This interval of time in which no water is available, may, and no doubt sometimes has, proven disastrous. This situation can be prevented by the correct use of a 2½-in. double siamese with shut-off or clapper valves, and a large shut-off valve of the same size and thread as the hydrant steamer connection.

"Operation 1: Permanently install the 2½-in. double siamese on section from the female end of the hydrant* to fire lay in the bed of the truck. When 'tieing-in' to a hydrant, hook the 2½-in. line according to the regular procedure. Also hook the closed large shut-off valve to the hydrant steamer connection and turn on the water. Water pressure from the hydrant will close the open side of the siamese with clapper valves and water will be carried to the fire. If shut-off siamese is used, the valve on the hydrant line must be open and the other valve closed.

"Operation 2: If more pressure, or water, or another line of hose is needed, hook up pumper to the valved steamer connection, and stretch a section of 2½-in. line to the open side of the siamese. Open the shut-off valve on the hydrant steamer connection and start pump. Run the water through the 2½-in line from the pump to the 2½-in. siamese. If a clapper valve siamese is used, the increased pressure from the pump will automatically close the clapper valve on the hydrant side of the siamese. The full water supply of the hydrant will be available to the pump, and other lines can be supplied from the pump if needed. If a gate shut-off is used on the siamese the results will be more satisfactory if the hydrant supply to the siamese is shut off. Of course, the supply from the pump must be open. At no time is the water supply from the hydrant to the original line of hose interrupted."

Mr. Kritzell adds this injunction: "Some care must be used in making a 'lay.' The siamese should be placed on the 'doughnut' in the bed of the truck. With a little care, both the siamese and the 'doughnut' can be removed safely and easily."

*Mr. Kritzell's description is a bit ambiguous. There is no "female" end of a hydrant. All hydrant outlets are male-threaded. He no doubt refers to the female end of the length of hose which is to attach to the hydrant.



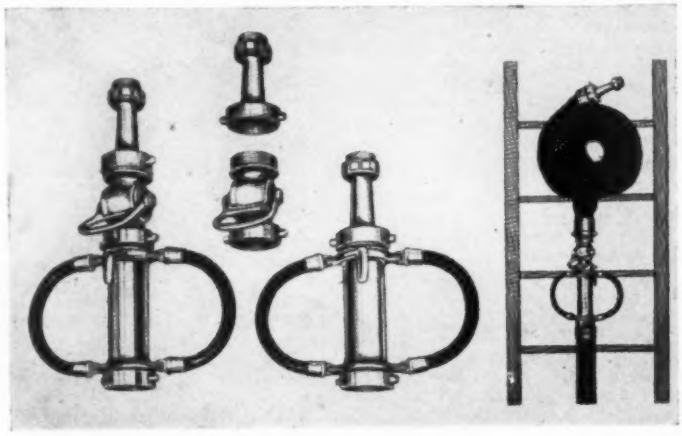
* * *

MORE ABOUT NOZZLE SHUT-OFFS

The following letter from John T. Corley, Pres. and Treas., J. M. Baker Pattern Company, Inc., Providence, R. I., makers of Baker turret shut-off and play pipes, tells its own story. Evidently manufacturers as well as fire officers diligently study "Short Cuts."

To the Editor:

"While reading through the February, 1947, issue of FIRE ENGINEERING we noticed on page 101 that John T. Gutches, Lodi, N. J., came up with an idea and a gadget for improving the general tendency to have the nozzle shut-off on what he terms the 'wrong end.' He states most hose line nozzles have the shut-off on the wrong end and he shows a sketch of same.



Baker Cellar Pipe, Showing Fittings

"We are sending you literature and explanation sheets with cuts on our 1½" and 2½" shut-off nozzle and little giant play pipe. We have a patent on a universal thread size on our shut-off and little giant play pipe where our nozzle tip is threaded 2½" on inlet and 1½" on outlet with a protector ring tip.

"You will note by these cuts that our shut-off can go on the rear of the little giant play pipe or on its front. You will also note that our nozzle tip can be screwed to the shut-off if desired without the play pipe and that 1½" hose can be coupled to the nozzle tip. Our shut-off nozzle and little giant play pipe allow the fireman to make any kind of changes desired."

Lack of space prevents our reproducing the illustrations in the literature submitted by Mr. Corley, but there appears to be no question about his company's use previously of the idea advanced by Mr. Gutches in our February number. The Baker shut-off takes the form of a separate unit which attaches to the male threaded end of the play pipe barrel, and provides the cut-off for changing the tips or other connections which are in turn attached to the male, threaded end of the shut-off unit. With this arrangement it is possible to lead off a line of hose from the threaded end of this shut-off the latter acting as a gate to facilitate starting or stopping the water flow.

News of the Manufacturers

Emergency Cutting Unit

Industrial, ship or dock fires often make rescue operations difficult because of bent or twisted steel girders, doors, bulkheads, frames, etc.

Victor Emergency Flame Cutting Unit as Carried on the Back

To handle such situations, the Victor Equipment Co., of 844 Folsom St., San Francisco, Calif., offers an emergency flame cutting unit.

The unit is compact and portable, and is housed in a carrying case. A spare cylinder unit, available on request, is similarly packed. The unit itself lies in a strap type cradle and a canvas bag holds it to the operator's back.

The regulators are so positioned that they do not protrude and are preset to suitable oxygen and acetylene pressures. The hand cutting torch is held in the harness so that it can be removed quickly.

Victor's Oxy-Acetylene Emergency Pack Type Unit C-8 for fire departments and rescue squads is furnished complete, including protective goggles, spark lighter, hose, leather gloves, cutting tips, wrenches and a fully illustrated instruction manual. A detachable pressure reading gauge is fastened onto the emergency cylinder unit to test oxygen pressure.

General Detroit Opens Canadian Branch

The incorporation of a new Canadian subsidiary with offices and warehouses in Toronto and Montreal is announced by E. A. Warren, Vice President of The General Detroit Corp., Detroit, Michigan. The new subsidiary, called The General Detroit Corp., Canada, Ltd., will serve the Dominion in the same way that General's other subsidiary, The General Pacific Corp., Los Angeles, serves the United States west of the Rocky Mountains.

Heading the new Canadian subsidiary will be Major Harris Popplewell, recently discharged from the First Canadian Army, and formerly associated with the Canadian National Carbon Company. Before that he was Director of Sales for the Calcutta, India, branch of United Battery Distributors, Ltd.

Major Harris Popplewell

Eberhardt Elected to Kidde Board

Election of Paul W. Eberhardt to the Board of Directors of Walter Kidde & Company, Inc. was announced June 3 by John F. Kidde, President.

Mr. Eberhardt has been associated with the Kidde Company for twenty-one years and, since 1945, has been a Vice-President. Recently he was elected President of the Fire Protection Institute.

War Department Fire Losses Show Substantial Reduction

War Department fire losses for the fiscal year of 1946, the latest complete year for which figures are available, show a substantial reduction over those for the previous year in the number of fires, the number of casualties and the dollar value of property damaged or destroyed, the War Department announced today. At the same time, civilian fire losses, according to the National Board of Fire Underwriters, were steadily increasing.

A report prepared by the Repairs and Utilities Division, Office of the Chief of Engineers shows a comparison between the two years as follows:

	Fiscal Year 1945	Fiscal Year 1946	Percentage Reduction
Number of fires...	2,534	1,728	—31.8
Amount of loss...	$4[illegible]7	$14,095,080	—66.9
Per capita loss....	[illegible]4.73	$4.68	—46.4
Loss per Thousand sq. ft. of floor area	$30.56	$10.17	—66.7
Deaths	52	25	—51.9
Injuries	258	211	—25.9

War Department per capita loss, which normally closely parallels civilian per capita loss, was approximately double the civilian figure during the fiscal years of 1944 and 1945, when war activity was at its peak. Probably the most important factors in this abnormal rise was the increased activity at posts, camps and stations and the intensified building program which saw the completion of an unprecedented nine billion dollar construction program which had begun in 1942. A large part of this program involved the use of the more highly combustible materials in temporary type structures. Another contributing factor was tremendous concentration of high value ammunition and other troops supplies at depots, holding and reconsignment points and ports of embarkation.

Comparison of the per capita losses, the report points out, must necessarily take into consideration the high value of the War Department property per capita as compared with the property value per capita in civilian figures. The value of War Department property in June, 1946, for instance, was estimated at nearly $62,000,000,000. This value is somewhat lower than the average for 1946 as considerable property was made surplus during that period. Considering the comparatively small number of per-

(*Continued on page* 453)

Firemen's Safti-Shield

The illustration above shows members of the Asheville, N. C., Fire Department wearing the Firemen's Safti-Shield, manufactured by the Firemen's Safti-Shield Company of Asheville, N. C. This shield is so attached to the helmet that it can be swung up and over the top of the helmet and out of the way, when not in use. It protects the men against the glare, radiated heat of hot fires, as well as the cold when riding to fires in open apparatus. M. W. Mamlin is designer of the new Safti-Shield and L. I. Hall, president of the company that manufactures it.

FALSE ALARMS

Remedy

The sweet, young lady had a little peke for a pet. But he was a bad dog, and besides, he suffered from Hydrant-phobia.

He always imagined that every room in the house was full of hydrants. So the sweet, young lady took him to a dog trainer to break him of his bad habits, and after several days, he was returned.

"Do you think he will be clean around the house, now?" she asked, shyly.

"Well," replied the trainer, "if he ain't, all I can suggest is the lethal chamber."

"Yes," she said blushingly, "but do you think he will use it?"

Tardy

On the ninth stroke of the clock Simpson awoke with a start. "Gosh," he groaned, "what a head I've got. I can't go to the office today."

He reached for the phone and called his boss's private number. "It's no use wrapping things up," he confessed. "Last night I was out with some pals and I'm ashamed to say I overdid it. I wonder if I could take the day off, sir?"

"Well," came the boss's voice over the phone, "I admire your candor, Simpson, and I shall expect you at nine tomorrow. As for the day off, it's yours. Today is Sunday."

Little Tommy, playing hooky from Sunday School, met the minister as he was going home. Tommy quickly held up his string of fish and said: "See, Reverend, what these heathen fish got for nabbin' at worms on Sunday."

A woman with seven children in tow got aboard a park-bound trolley car. The conductor watched a moment, then asked, friendly-like: "Are these all your children, or is this a picnic?" She glared at him a minute and then snapped: "They are, and it ain't, if you're askin' me!"

Sadie: "That husband of mine is a worm if there ever was one."

Daisy: "Yes, I just saw a chicken pick him up."

Repeater

A fireman phoned his doctor. "Come quick!" he pleaded. "My wife has appendicitis!"

The doctor gave a telephone double take. 'Huh! I took out your wife's appendix three years ago, and I never heard of anyone having a second appendix."

"Doctor," replied the fireman, "have you ever heard of anyone having a second wife?"

Opportunist

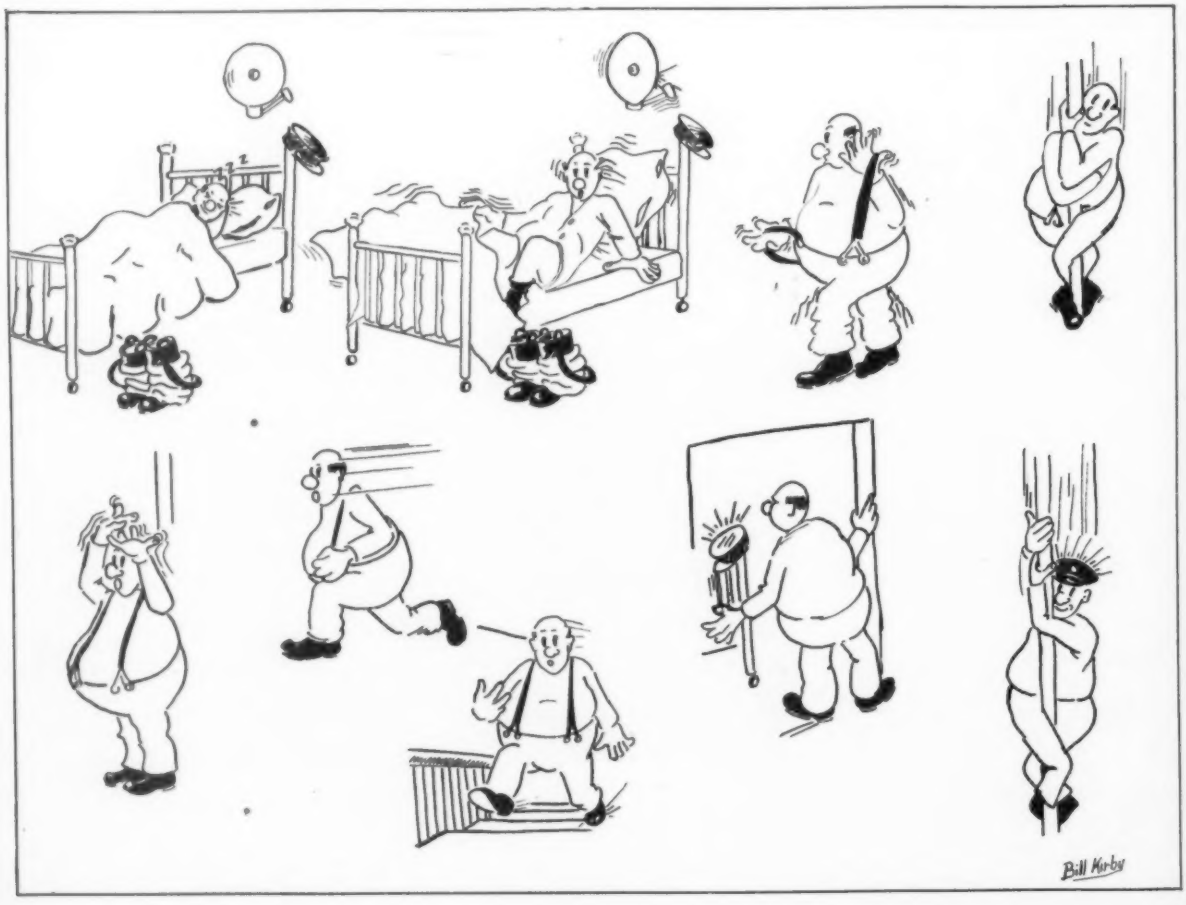
The bus driver came upon a highway accident, just outside a town known to be thickly populated with Scots. The victims, several in number, were still lying about the road, and he hurried about giving first-aid.

Along came a native who inquired: "Has the insurance man been around yet?"

"No," was the driver's reply.

"Ah, weel then, I'll just lie doon aside this mon, if ye dinna mind," said the Scot.

When a girl looks good in a bathing suit, a man usually looks good, too.



New Pumpers! for Morristown, N.J.

Again THEY'RE AHRENS-FOX!

MORRISTOWN'S two new Ahrens-Fox Model H.T. 1000 g.p.m. Twin-Triple Piston Type, Triple Combination Pumpers just delivered to Washington Engine Company No. 1, and Independent Hose Company No. 1. A third Ahrens-Fox, Model E.C. 750 g.p.m. Centrifugal Type, Triple Combination Pumper is now being built for the city's First Ward Hose Company.

PROTECTION

TOWN OF MORRISTOWN
NEW JERSEY
FIRE DEPARTMENT

JOHN J. CULLINAN
CHIEF

June 12, 1947

The Ahrens-Fox Fire Engine Corporation
Cincinnati, Ohio.

Gentlemen:

The Morristown Fire Department has just received delivery of two (2) new 1000 gallon capacity Ahrens-Fox twin triple combination piston pumping engines, both of which have been given a thorough acceptance test. The two pumpers performed very smoothly and showed a large reserve of power for road and pump performance.

The Fire Department has had in service five (5) of your apparatus ranging from 19 to 30 years and I can truthfully say that each one of these apparatus have been very dependable and have measured up to the high standards of your product.

The up-keep has always been very economical and whenever service was needed it was attended to by your company in a courteous and highly satisfactory manner.

We have again picked the Ahrens-Fox because of its easy operation and sturdy construction, and I can highly recommend the Ahrens-Fox Engine as a very dependable and efficient piece of fire fighting apparatus.

Very truly yours,

John J. Cullinan

CHIEF OF FIRE DEPARTMENT

JJC:EDP

FOR DEPENDABLE FIRE PROTECTION rely on

AHRENS-FOX

A PUMP FOR EVERY PURPOSE

THE AHRENS-FOX FIRE ENGINE CORP., CINCINNATI 12, OHIO

Birmingham Radio

(*Continued from page* 441)

nicians handle maintenance and repairs. One chief engineer functions as supervisor. The fire department staff has seven operators, including the chief radio fire alarm operator.

The radio shop is well equipped with spare parts, tools and testing equipment for making repairs or constructing radio equipment.

The entire radio system—which it is reported cost the city $12,500 to purchase and install—is operated in conjunction with the Gamewell fire alarm system which was installed in 1921.

The main transmitter, as we have said, is amplitude modulated and operates on 2382 kc. It is a rugged bit of radio apparatus and its users class it as superior in many respects to the finest broadcasting transmitter. Limited to 1000 watts by the F.C.C., it is capable of several times that power. The antenna is a 217 foot, self-supported, vertical radiator, operating at 190 degrees. The ground system consists of 180 radials (more than eight miles of copper wire) buried in marshy earth.

In addition to this main transmitter, a 400 watt Western Electric transmitter is available as a spare. To change from one transmitter to the other, it is only necessary to operate one small toggle switch.

All transmitters and receivers used by both police and fire departments are identical, except for difference in frequencies. The transmitters (for the mobile units) are frequency modulated (FM) with a power output of 30 watts. The receivers are Galvin modern police cruiser type, tuned for 2382 kc operation. The fire department uses two station receivers for picking up messages from fire apparatus. One is a remote pick-up from a high point on Red Mountain where output is fed over leased wire to a line amplifier in the central control console. The other is a spare and is located at the dispatching position at fire alarm headquarters.

Experiments with "Walkie Talkie"

The Birmingham Fire Department has conducted some experiments with the Army-type 'walkie talkie' with a view to utilizing this improvement in its on-the-fire-ground communications. The Army equipment, although modified somewhat for fire department use, gave only fair results, it is reported. The trouble was mainly due to high noise-to-signal-ratio, encountered particularly in downtown city areas. Notwithstanding this fact, fire alarm headquarters optimistically reports that if and when manufacturers develop a 3-watt, FM instrument, operating in the 30 to 40 mc band, they anticipate excellent performance. When this time comes, the department will use the 'walkie-talkies' as an aid in handling communications from fire-fighter to fire-fighter unit; from fire-fighter to apparatus and from fire-fighter to fire alarm headquarters.

Public Safety Commissioner Eugene Connor, who has charge of the fire department, is enthusiastic over his city's radio installation. He calls the system the greatest advancement made in the department since he became commissioner.

Los Angeles Ship Explosion

(*Continued from page* 439)

at the fire soon after the first alarm, was one of the officers of the Los Angeles Fire Department who visited the scene of the Texas City Disaster, and his comments concerning the comparative characteristics of the explosions are interesting. He indicated that while the explosive force of the Markay blast was not nearly so great as the explosions which blew up the ships at Texas City, the extent and volume of the fire in Los Angeles Harbor was as great or greater.

However, the Los Angeles Fire Department was particularly fortunate in being able to confine the fire to the areas which were involved upon their arrival. Chief Boone said that if the Markay fire had spread to communicate to the many gasoline storage tanks which were dangerously close, the resulting fire would have been very much greater.

"The fire was traveling toward its exposures" said Chief Boone, "and the department concentrated on covering these exposures. This fire emphasizes the importance of covering all exposures in a situation of this kind."

Chief Boone commented that the Department was particularly fortunate in being able to hold the fire from the factory of the Pacific Coast Borax Company, where the windows of a four-story warehouse were blown out, and he also referred to the excellent stop made at

the Union Oil Company's pier 151 by firemen and oil company employees.

Captain L. L. Bice of the Bureau of Fire Investigation, L. A. F. D., made a detailed investigation following the fire, and in his report to Chief Engineer John H. Alderson, he indicated that, as a lesson of the fire, there is a problem to confine and isolate volatile gases which are present during tanker loading operations.

ASSIGNMENT OF COMPANIES—LOS ANGELES HARBOR FIRE

Response to first alarm and third alarm (simultaneous):

2:09 A.M. Engine Co. 36 to fire
2:09 A.M. Engine Co. 53 to fire
2:09 A.M. Engine Co. 49 to fire
2:09 A.M. Engine Co. 38 to fire
2:09 A.M. Engine Co. 48 to fire
2:09 A.M. Fire Boat 2 to fire
2:09 A.M. Fire Boat 3 to fire
2:09 A.M. Fire Boat 1 to fire
2:09 A.M. Truck Co. 48 to fire
2:09 A.M. Truck Co. 49 to fire
2:09 A.M. Salvage Co. 36 to fire
2:09 A.M. Rescue Co. 36 to fire
2:09 A.M. Boat Tender 36 to fire

(Note: The above response included all Companies in the San-Pedro-Wilmington Harbor District except Engine 40 which was held in its quarters on Terminal Island in reserve.)

Companies changing location:

2:09 A.M. Engine Co. 33 to Engine Co. 36
2:09 A.M. Engine Co. 33 to Engine Co. 49
2:09 A.M. Engine Co. 50 to Engine Co. 36
2:09 A.M. Engine Co. 7 to Engine Co. 49
2:09 A.M. Engine Co. 45 to Engine Co. 57
2:09 A.M. Engine Co. 4 to Engine Co. 49
2:09 A.M. Truck Co. 10 to Truck Co. 48
2:21 A. M. Engine Co. 58 to Engine Co. 64
2:21 A.M. Engine Co. 5 to Engine Co. 79
2:35 A.M. Engine Co. 18 to fire
2:35 A.M. Engine Co. 50 to fire
2:35 A.M. Engine Co. 7 to fire
2:41 A.M. Foamite Co. 66 to fire
2:45 A.M. Engine Co. 45 to fire
3:00 A.M. Engine Co. 64 to fire
3:00 A.M. Engine Co. 46 to fire
3:00 A.M. Engine Co. 57 to fire
3:00 A.M. Engine Co. 79 to fire
3:00 A.A. Engine Co. 66 to fire
3:01 A.M. Utility Co. 3 to fire
3:05 A.M. Engine Co. 58 to fire
3:10 A.M. Engine Co. 4 to fire
3:17 A.M. Engine Co. 5 to fire
3:22 A.M. Engine Co. 21 to Engine Co. 49
3:32 A.M. Engine Co. 70 to Engine Co. 57
4:37 A.M. Engine Co. 28 to Engine Co. 38
4:57 A.M. Utility Co. 27 to fire

War Department Losses Reduced

(*Continued from page* 449)

sonnel in the War Department during that period, the resulting per capita value of property is tremendously high.

With the substantial drop in War Department per capita loss for the fiscal year of 1946, and steady increase in civilian per capita loss, War Department figures again closely approach those of the nation as a whole, and figures for 1947 so far indicate that War Department losses will be considerably below those of the country as a whole. Tremendous concentration of values still exist at War Department installations and as personnel is still low, one or two large losses might sharply increase the per capita figures.

The ratio of loss to protected value is estimated to be slightly over two cents per hundred dollars valuation. This ratio is extremely favorable when compared to civil experience wherein only reinforced concrete sprinklered buildings with low moderate combustible occupancy have attained such a low loss rate. Fire insurance companies report loss ratios over 10 times this amount

(*Continued on page* 458)

SUPPLE, SMOOTH

... that's Eureka "Streamlined" Fire Hose. *Supple* because of Balanced Weave that makes a fabric of correctly twisted cords under uniform tension. *Smooth* because of the unique Interior Filler Ply, which provides a smooth waterway, avoids "washboarding", assures maximum pressure at the nozzle.

Eureka Oxygen Bomb Test scientifically proves the aging qualities of the hose lining, makes sure it will remain smooth and uncracked. Effective prevention of all known forms of mildew is provided by Eureka's exclusive "Formula X."

EASY TO HANDLE... Eureka will not buck or "run amuck." The Balanced Weaving and patented Controlled Curing eliminate excessive writhing, permit easier handling on ladders, on the ground, or when loading in the wagon.

EUREKA

"For greater protection to life and property"

EUREKA FIRE HOSE

Division of United States Rubber Company

1230 Avenue of the Americas • Rockefeller Center • New York 20, N. Y.

Kindly mention FIRE ENGINEERING *when writing advertisers*

Austrian Firemen

(*Continued from page* 442)

$10 per package. This was an excellent value, but I understand the supply has been exhausted. However, C.A.R.E. is still maintaining the service with a different package. A $10 bill, mailed to C.A.R.E., 50 Broad St., New York City, with a sheet of paper bearing your name and address, and the name and address of the person and group overseas to whom the package is to be sent, will achieve the desired result.

I cannot urge too strongly the great need for aid for the Austrian firemen, either from individual American firemen or by action of firemen's relief associations or ladies' auxiliary groups.

Food items needed most are fats, meat, concentrated soups, dried milk, dehydrated eggs, dried fruits, canned fish, canned vegetables, sugar and coffee (bean or soluble). *Do not* send fresh meats or vegetables as they are perishable. Salt is produced in Austria and is not in short supply.

Pack the items tightly, stuffing paper into all unfilled spaces to make a solid package. Pad glass containers extra carefully against breakage. Tie the package very tightly, with strong cord. After all, if you go to the trouble of sending a food package you want it to get there in good condition.

By sending food to the paid firemen of Austria you will be taking part in a humanitarian program. Communism feeds and thrives upon uncertainty, unrest, disunity and hunger. It not only thrives upon these conditions, it breeds them. In Austria the communist party is openly engaged in exactly that program. Openly and crudely.

Every opponent of communism is branded a reactionary or a hated capitalist. Every humanitarian act is termed a bribe or "dollar diplomacy." Planning and conspiring to keep the people hungry, to deprive them of fuel, by the crudest tactics imaginable, is everyday working policy with the Austrian communist party, which takes its orders from the Soviet occupation command and operates with full Soviet support.

Food for the firemen of Austria will do more than fill a few bellies; it will add democratic weight to the saving of a worthy nation for the ranks of freedom.

PROVE IT YOURSELF

Send for your . . . Free Sample

Mail coupon for a 6 oz. sample of Linck WW—enough to treat up to 10 gallons of water. Try it as recommended on a mattress fire or some other tough one.

You'll find Linck WW added to water increases its fire fighting effectiveness, reduces danger of re-ignition, reduces need for re-wetting, stretches water supplies.

Full details of the amazing story of "wet" water for easier, more effective fire fighting will be sent to you with your sample, together with full directions for use.

Send for your FREE sample today. Convince yourself that Linck WW makes water "wet," makes fire fighting easier.

O. E. LINCK CO., INC.
CLIFTON, NEW JERSEY

O. E. LINCK CO., INC.
CLIFTON, N. J. (FE 7-47)

Without obligation, send me free 6 oz. sample of Linck WW, descriptive literature, and directions for use.

Name.....

Fire Department.....

City.....

Our Supply Dealer Is.....

Address.....

New England Chiefs Meet

The New England Association of Fire Chiefs held its annual convention at the Wentworth Hotel, Portsmouth, N. H., on June 24-26, with Chief Frank J. Callahan of Central Falls, R. I., the President, in the chair.

After the opening exercises, Chief Charles A. Delaney, President of the International Association of Fire Chiefs, extended the greetings of the Association, after which the annual memorial services were held.

The first business session included addresses by George J. Richardson, Secretary-Treasurer of the International Association of Fire Fighters; A. Bruce Bielaski, Assistant General Manager, National Board of Fire Underwriters; Percy Charnock, Manager of the New England Fire Insurance Rating Association; Chief Alfred H. Koltonski of Rutland, Vt.; Former Chief Samuel J. Pope, Boston, Mass.; and Chief Daniel B. Tierney of Arlington, Mass.

The second business session, held Wednesday morning, consisted of a symposium covering a number of timely problems of the fire service. It was under the chairmanship of Fred Shepperd of FIRE ENGINEERING.

At the end of this session, Former Chief Selden R. Allen of Brookline, Mass., past President and Director of the International Association of Fire Chiefs from New England, explained the present constitution and by-laws of the International Association of Fire Chiefs relative to the district organizations. He pointed out that in order to have representatives on the Board of Directors of the International Association of Fire Chiefs, a district organization must collect International dues for each and every member

Because of the limitation of time, the discussion was carried over to a special session in the afternoon when the matter was thoroughly aired.

A vote was ultimately taken, and the New England Association voted to withdraw its affiliation with the International Association of Fire Chiefs.

At the election of officers, Chief Arthur W. Spring of Laconia, N. H., was elected President; Chief William H. Hill of Belmont, Mass., First Vice-President; and Chief John W. O'Hearn, Secretary-Treasurer.

The annual banquet of the Association was held on Wednesday night, with Governor Charles M. Dale as guest speaker. Others who also spoke were Mayor Mary C. Dondero of Portsmouth,

Chief A. J. Cote of Woonsocket, R. I., and Secretary-Treasurer John W. O'Hearn. Chief Selden R. Allen was toastmaster. At the banquet a check of $1,000 was presented to Chief O'Hearn in recognition of his twenty-five years service as Secretary-Treasurer.

Next year's convention of the New England Association will be held in Portsmouth, N. H., and the Newcastle Hotel will be the headquarters.

Southeastern Chiefs Meet

The annual convention of the Southeastern Association of Fire Chiefs was held in Roanoke, Va., on June 9 and 10.

Among the speakers on the program were T. Alfred Fleming of the National Board of Fire Underwriters, New York City; Chief Henry R. Chase, Miami, Fla.; Chief D. W. Brosnan of Albany, Ga.; Chief J. M. Duncan, Alexandria, Va.; Clay A. Easterly, State Fire Instructor, Richmond, Va., and Chief Walter W. Stephen, Monsanto Chemical Company, Anniston, Ala.

The following officers were elected for the ensuing year: Chief L. L. Petrey, Mobile, Ala., President; Chief E. F. Beville, Gainesville, Fla., First Vice-President; Chief R. O. Noble, Cordele, Ga., Second Vice-President, and Chief Walter W. Stephen, Monsanto Chemical Co., Anniston, Ala., Secretary-Treasurer.

Mobile, Ala., was selected as the 1948 convention city.

Host to the convention was Chief W. M. Mullins of Roanoke, Va.

Missouri Valley Chiefs Meet

The Missouri Valley Association of Fire Chiefs held its annual meeting in Omaha, Neb., June 9-11, with Chief C. W. Brown of Wichita, Kans., its President, presiding.

Speakers on the program included Fire Commissioner Joe Dolan, Omaha; J. F. Dalton from the Chicago Office of the F.B.I.; Hugh Walker, American LaFrance-Foamite Corp., Elmira, N. Y.; Robert C. Byrus, Iowa State College; Assistant Chief Martin T. Gaffney, Kansas City, Mo.; J. I. Fetters, Instructor, State Board of Education, Lincoln, Neb. The last three named conducted a round table discussion.

On Tuesday morning, the convention heard Rodney Brown, Chief Building Engineer, Omaha, Neb.; Chief Ben Meister of the Omaha Fire Department; Harry Corcoran, Engineer, Iowa Insurance Service Bureau, Des Moines, Ia.; and Chief J. J. Fetters.

Tuesday afternoon was given over to a number of demonstrations conducted by the Omaha Fire Department under the direction of Chief Ben Meister and Chief Instructor Bernard Nestler, on open pit oil fires, butane gas fires, simulated airplane crash fires, simulated gasoline transport truck fires and the use of low and high pressure fog.

The Wednesday morning program included Chief Charles Slade, Des Moines, Ia., who led a round table discussion; T. Alfred Fleming, National Board of Fire Underwriters, New York City; and District Chief C. E. Holder, Wichita, Kans.

On Wednesday afternoon after a round table discussion on matters pertaining to volunteer and part paid de-

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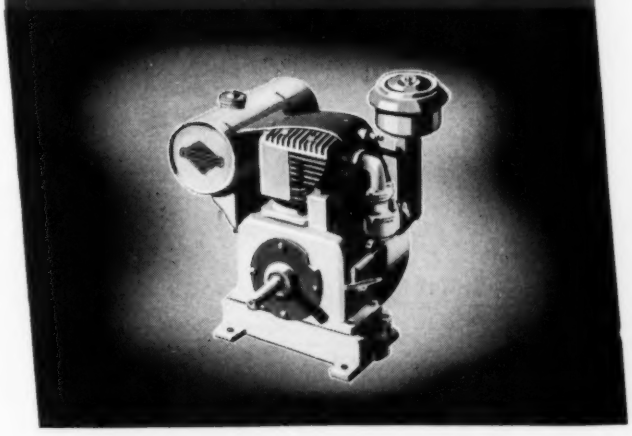

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partments and an address by Captain Robert Smith of Omaha, the election of officers took place. These include: Chief Charles L. Slade, Des Moines, Ia., President; Chief William H. Gardner, Underwriters Patrol, Kansas City, First Vice-President; Chief R. J. Van Fleet, Hastings, Neb., Second Vice-President; and Chief Ray Tiller, Waterloo, Ia., Secretary-Treasurer. Chief Tiller was also named Director to the International Association of Fire Chiefs.

June Floods Prove Costly; Rutland, Vt., Hard Hit

With reports still incomplete, damage caused by torrential June rains and ensuing floods in the Missouri and Mississippi River watersheds, and in Vermont is estimated at over $160,000,000.

Typical of the problems facing the fire service, and the prompt and efficient manner in which the emergencies were met is the case of Rutland, Vt.

Rutland, third largest city in the state, was the victim June 3 of a quick and devastating flood, brought about by day-long torrential rains which piled up water behind the big Chittenden power dam, north of the city and spilled it into East Pittsford Lake, just below, until the dam gave way. The released water —110 acres of it—roared down eight miles into lower Rutland, uprooting trees, crushing houses, destroying bridges and, worst of all, depositing up to three feet of mud on highways.

That evening the entire city of Rutland was without electricity, water pressure or gas. The greatest and most pressing danger—realized by few—was that of fire. Because the water mains supplying the city's fire hydrants had been washed out in three places, no hydrant water was available. Chief A. H. Koltonski, of Rutland, immediately mustered every available fireman for duty and had his crews working twenty-four hours a day.

Hand extinguishers were procured from every possible source and distributed among the five pieces of fire equipment in operation. Water to replenish booster tanks was carried into the city in three milk trailer trucks. On the evening of the disaster, the fire department had mobilized, and completed preparations for whatever might eventuate.

Next day, fire apparatus summoned in the emergency, began to arrive from New York State and other sections of Vermont. The National Guard and Regular Army sent six pumpers with full crews. Within a short time, citizens were heartened by seeing a small army of equipment and personnel lining the curbs adjacent to the local fire house. However, there was one serious drawback remaining. There was no way of reporting a fire, except by automobile, for during the thirty hour period of travail, the city had no telephone service.

Adding to the peril was the fact that residents of Rutland resurrected old oil lamps and candles to furnish light during the two nights of the 'blackout'.

Within three days after the flood, Chief Koltonski and city engineers devised a plan to supply city residents with at least enough water for the domestic service, to flush toilets and to wash with. To create an emergency supply for the fire department, city apparatus was used to pump water into the mains from local Tenney Brook, using fire hydrants as intakes. Later, army pumps replaced the fire apparatus in this operation.

This system, although affording some measure of fire protection was naturally hazardous to the public's health. People were warned not to drink this water without first boiling it.

The emergency supply system was carried out for almost three weeks until Public Works Commissioner Kallio was able to have some 600 feet of sixteen inch pipe laid to resurrect the service.

Fire apparatus was also successfully used for pumping the silt out of long sections of mains by an ingenious arrangement. A circle of wide, heavy timber was cut to fit snugly into the end of the sixteen-inch main. Into this bulkhead of wood were cut six holes to accommodate the six lengths of hose that were fitted into the end. Water was then pumped under pressure from two engines and the plan proved effective.

On the second day, electric service was brought in from Bellows Falls and while this restored local service, it, in turn, presented further fire hazards. Many wires in flooded houses were found to be "alive" as a result of flood damage. Six inches to a foot of mud covered first and second floors of many houses, threatening base plugs and internal wiring. The fire department and other emergency forces were alerted to

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Sturdy cotton jackets are carefully woven to eliminate weak spots and resist the effects of high pressure, abrasion, severe use. Tough rubber tube, expertly compounded, defies drying out...is non-acid forming...remains soft and flexible.

Cities, communities, industrial plants that want top security when fire strikes rely on Quaker Modern Municipal Fire Hose. It's built by hose specialists for long-lasting, dependable service. For safety's sake, get Quaker.

"If there's a way to get it done... Quaker will do it."

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the possibility of electrical fires, but fortunately no serious blazes developed.

De-watering of basements and cellars was undertaken, using every type of improvised pump that was available.

Providentially, Rutland was spared a serious fire during the period of emergency. But had it come the fire department was as prepared for it as humanly possible.

Editor's Note: Information on the Rutland flood was supplied by FIRE ENGINEERING's Correspondent Steve Stillman, Larchmont, N. Y., who was on the ground—and in the water!

Freehold Celebrates Fire Department's Diamond Jubilee

Freehold, and the firemen from Monmouth and neighboring counties, celebrated the 75th Anniversary of the founding of the Freehold, N. J., Fire Department, on June 28th.

A drenching rain and spectacular electrical storm which caused a slight fire, failed to interrupt the two and a half hour parade spectacle which saw over 100 pieces of fire equipment, twenty-five ambulances and miscellaneous other vehicles, with more than 3,000 firemen and auxiliaries, in line representing approximately 60 communities within a fifty-mile range of Freehold, some coming from Pennsylvania.

Judges were: Warrant Officer Meyer Goldman, Fort Monmouth, and Newton Stewart, Rumson, N. J., bands and bugle corps; Chief Harry T. Litts, Fort Monmouth, Edward Ballentine, Public Safety Director, Irvington, N. J., and Elmer Hesse, Fort Monmouth judged fire companies; Mrs. William Bedell, Lakewood and Mrs. Katherine Hesse, Fort Monmouth judged auxiliaries, and Harold R. Lippincott, Neptune City, N. J., judged first aid squads.

Officers of the Freehold Fire Department are: Chief, James C. Ryan; First Assistant Chief, George J. Mulholland; Second Assistant Chief, J. Everett Barkalow; Myron Van Derveer, Treasurer; Wm. Rhodes, Asst. Treasurer and Oliver Kehs, Secretary. Active in directing the celebration were Mayor Fred Quinn and other city officials, William N. Callahan, general chairman Celebration Committee, Earl E. Dix, Finance Chairman of the Freehold Fire Department who was master of ceremonies at the race track entertainment. J. Aloysius Carey, president, Freehold Engine Hose Co. No. 1, directed affairs at the reviewing stand.

An attractive plastic bound book commemorating the department's Diamond Jubilee was published by the Freehold Fire Department.

Change in Veteran Preference?

Important modifications in the present federal Veteran's Preference Act have been proposed in the Cain-Rees bill placed before the Senate Committee on Civil Service in May.

Principal features of the bill are as follows:

1. Under present law, all veterans receive a point bonus added to their earned examination grades (five points for veterans and ten points for disabled veterans). The bill would require that veterans must attain a passing mark

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Last Month...
WATEROUS Fire Pumps are thoroughly tested under rigid contract requirements and broken in under full power before shipment for installation on your new fire apparatus. It's a "dress rehearsal" to insure dependable performance on the job.
Standard equipment on leading makes of fire apparatus, WATEROUS Pumps are backed by 60 years of pump engineering and production know-how. Specify WATEROUS on your new pumper for dependability and long service. Your copy of the new WATEROUS Fire Pump Catalog is ready now. Send for it.
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an examination before the five or ten points bonus is added.

2. Under present law, all veterans who are rated by the Veteran's Administration as "disabled" in any degree are entitled to the special preferences granted "disabled" veterans. The bill would amend this to restrict disabled veterans' preference to those whose disabilities entitle them to compensation (i.e., veterans rated ten per cent or more disabled by the Veterans' Administration).

3. Under the present law all disabled veterans, irrespective of their degree of disability, go to the head of the eligible list except in specified classes of professional and scientific positions. The bill would restrict this super-preference to those veterans who are rated thirty per cent or more disabled by the Veterans' Administration.

War Department Losses Reduced

(*Continued from page* 453)

for ordinary brick and frame construction with moderately combustible contents in cities having public fire protection.

The largest number of fires and the largest number of deaths and injuries occurred in buildings used for housing and messing. The greatest monetary loss occurred in aviation shops, with storage buildings second. Less than 5% of the total number of fires accounted for more than 90% of the monetary loss.

Careless smoking was responsible for one out of every four fires; for more than 40% of the total monetary loss. Fires in wood frame and brick joisted buildings averaged more than 80 times the monetary loss in fire resistive buildings. Automatic sprinklers compiled a good record. The effectiveness of first-aid equipment and hose streams in the hands of trained personnel was demonstrated many times. While the number of fires and severity of monetary loss increased during winter months when additional hazards of heating were present, fire struck at every hour of the day, but most frequently during the operational period from 8:00 A.M. to 10:00 P.M. when personnel are active.

Delay in reaching the fire with the pumper might easily result in the loss of a building. As an auxiliary fire fighting weapon the Gorman-Rupp "Dual Fire Fighter" often proves of great value. Not only will it serve as a booster pump relaying water which is inaccessible to the pumper but may be carried to a scene of action difficult of access for the pumper and used to fight the fire direct. It might thus save valuable time and possible damage to the pumper.

The Dual Fire Fighter will also dewater basements without damage to the pump as it will handle anything which will pass the intake screen.

- **Powered with a dependable four cylinder engine.**
- **Delivers 170 gallons at 30 pounds to the pumper for two 1½ inch lines.**
- **In fighting direct throws 100 gallons at 70 pounds or 80 gallons at 80 pounds at the pump.**
- **Easily carried by two men (weight 150 lbs.)**
- **Price surprisingly low — get one now. Don't Wait.**

Complete information in our Bulletin FD-3.
Some territory open for live distributors.

THE GORMAN-RUPP COMPANY
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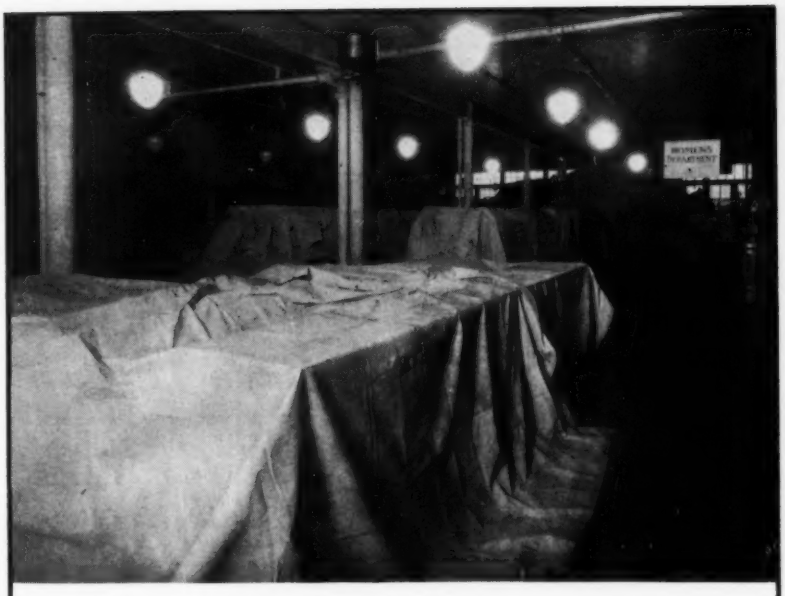
What's Burning

THE following list includes fires of $10,000 loss and over in the United States and Canada for the month of June, 1947.

Month Ending June 30, 1947

Georgetown, Ky.—Mallard Pencil Co. damaged.
Little Rock, Ark.—Scott Street Methodist Church and nearby apt. house, destroyed.
Oldsmar, Fla.—Oldsmar Hotel destroyed.
Amsterdam, N. Y.—Bennett Chemical Co. plt., Hagaman, five miles north, destroyed.
West Bend, Wis.—Main bldg. of Pick Industries, Inc., automotive parts mfrs., destroyed.
Fairmont, N. C.—Storage whse., Fairmont Branch, Intl. Planters Corp., with 95,000 pounds of tobacco, destroyed.
Keokuk, Ia.—Garage of Midwest Transit Lines destroyed. Gasoline igniting.
Falls City, Neb.—Caverzagie drug store destroyed. Defective electric refrigerator.
Edinburg, Pa.—Two bldgs. at American Cyanamid & Chemical Corp. plt. destroyed. Explosion of gelatin dynamite in a gelatin mixer.
Norristown, Pa.—Hospital cottage of All Saints Hospital for Treatment of Tuberculosis, Springfield Township, damaged.
Issaquah, Wash.—Airplane hangar, Sky Ranch Airport, destroyed. Explosion.
Varnville, S. C.—Dry kiln of the Varnville Wood Products Co. and lumber shed, filled to capacity with furniture squares, destroyed.
Edmonton, Alta.—Royal Canadian Air Force Hangar, Edmonton Airport, destroyed.
Chicago, Ill.—Great Lakes Spring Corp. damaged.
Southbridge, Mass.—Mansion of John M. Wells damaged. Started in radio room.
Kansas City, Mo.—Roller coaster and six other structures, Fairyland Park, damaged.
Kansas City, Mo.—Bldg. occupied by A. O. Thompson Lumber Co. and Modern Roof & Insulating Co., damaged.
Cheektowaga, N. Y.—Nob Hill Shopping Center, occupied by tavern, grocery store, delicatessen and dry goods store, damaged.
Lancaster, Pa.—Tobacco whse. at No. Mulberry St. and Harrisburg Pike, damaged. Lightning.
Vancouver, B. C.—Abanac Contracting Co. plt., British Columbia Door Co. and Eburne Saw Mills Co., damaged.
Moncton, B. C.—Y. M. C. A. bldg. damaged.
Shelton, Conn.—Former D. N. Clark bldg. and bldg. owned by Henry G. Benowitz, damaged. Occupants included Holovach Mfg. Co., mfrs. of fishing equipment and the A. & P. Market.
Marblehead, Mass.—Wing of Eastern Yacht Club, Marblehead Neck, destroyed.
Detroit, Mich.—Bldg. of Gair Co., paper box mfrs., damaged.
Lodi, Cal.—Electro-plating plt. at home of Donnell Cuptil, Hogan Lane, east of Highway 99, destroyed.
Pittsfield, Mass.—Ferry's Lumber Co. bldgs. damaged.
Levering, Mich.—Munger genl. store and residence of Lyle Chapin, destroyed.
Cleveland, Ohio—Hardware store and grocery, Shaker Heights, destroyed.
Camden, S. C.—Sunny Hill plantation, owned by Clifford M. Leonard, destroyed.
Donna, Tex.—Tomato packing shed and lumber shed destroyed.
Bainbridge, Ga.—Elberta Crate Co., fruit crate mfrs., destroyed.
Bowling Green, Ky.—Hancock-Hill Furniture Co.; Herman Lowe Hardware Co., and Callas Drug Store in same bldg., destroyed.
Hamlet, N. C.—Royal Crown Bottling Co. plt. destroyed.

Crossville, Tenn.—Main section of Plateau Handle mill, destroyed. Electric motor.
Nelson, B. C.—Provincial Government garage destroyed.
Chillicothe, Ohio—St. Peter's Catholic Church destroyed.
Nashville, Tenn.—Kerr Furniture Co. damaged.
Wilmington, Cal.—Tanker "Markay" owned by Keystone Lines, anchored at Shell Oil Co. pier; two berths of Shell Oil Co. dock; three berths, two whses. on facilities of American President Lines, destroyed. Another berth of American President Lines, damaged.
Rahway, N. J.—Koos Bros. furniture store destroyed.
Grass Valley, Cal.—Drying yards of Calida Lumber Co. and Empire Mill Works Corp., including 8,500,000 feet of lumber, destroyed.
Seaside, Cal. — Seaside resort hotel, nine adj. bldgs., destroyed.
Granville, Que.—Barn on farm of Arnold Wald destroyed.
Columbus, Ohio—Torpedo bomber destroyed and hangar damaged at Naval Air Station at Port Columbus Airfield.
Lawrence, Mass.—Bldg. occupied by Lawrence Post 1549, Veterans of Foreign Wars, damaged.
Medford, Ore.—Two whses., Ben Anderson genl. store, Jacksonville, destroyed.
Key West, Fla.—North Beach Inn destroyed.
Wrangell, Alaska — Whse. of Farwest Canning Corp., along waterfront, destroyed.
Ebensburg, Pa.—Aroney's Food Market damaged.
Los Angeles, Cal.—Casa Seville, Spanish restaurant, damaged. Cigarette.
New Haven, Conn.—Whse. of Armour & Co., meat packers and wholesaler, damaged.
Cowgill, Mo.—Dwelling of Maude Stone; O. K. Garage; postoffice bldg. and Russell Fields grocery store, damaged.
Nashville, Tenn.—Former health resort bldg., Browns Lake, nine miles from city, destroyed. Overheated oil furnace.
Charleston, W. Va.—Pelfrey Motor Co., a Ford agency, Cabin Creek Junction, 15 miles east of Charleston, and two business bldgs., occupied by Smith's Departmnet store, Kroger Grocery & Baking Co. store, Mountain State cafe. Offices of R. A. Henson and Matt Bouldin and apt. of Lee Jarrett.
Bedford, Que.—Grain mill destroyed.
Atlanta, Ga.—"Montevilla," palatial dwelling of Charles H. Black, destroyed.
Rocky Mount, N. C.—H. M. Walker Lumber Co. plt., Gold Rock, Nash County, damaged.
Cincinnati, Ohio—Factory-whse. owned by Edgar T. Ward Sons Co., div. of Columbia Steel Shafting Co., occupied by Cincinnati Street Railway Barns, Summerhill Tubing Co., Nicholls Industries, Inc., and Plant of Shepard Elevator Co., destroyed.
Vidor, Tex.—Two bldgs. of Vidor Lumber Co. destroyed.
Appleton, Wis. — Normandie Night Club destroyed.
Manistee, Mich.—Foundry bldg. of Manistee Iron Works Co. destroyed.
Sebewaing, Mich.—Wallace and Morlay Co. grain elevator, damaged.
Canal Fulton, Ohio—Sts. Phillip and James Church destroyed. Lightning.
Danville, Pa.—Hotel Watts damaged.
Patmos, Ark.—Dry Kiln of Anthony White Lumber Co. destroyed.
Perth Amboy, N. J. — Schindel's Dept. Store, heart of business district, destroyed.
Philadelphia, Pa.—Dwelling of W. W. Montgomery, Jr., near King of Prussias Road, Radnor township, destroyed.
Houston, Tex.—Nuro Co., mfrs. of cross-arms for telephone poles, damaged.
Sulphurdale, Utah—Sulphur extraction mill of Utah Sulphur Corp., destroyed.
Wheeling, W. Va.—Middle Wheeling Creek consolidated school destroyed.
Saskatoon, Sask.—Two grocery stores, two cafes and dress store, Main street of Hanley, destroyed. Barber shop and pool room, damaged.
Davenport, Ia.—Six bldgs. of Davenport Packing Co., city limits, destroyed. Short circuit.
Hamilton, Ont.—Opera House, Village of Caledonia, destroyed.
Chicago, Ill.—Albert's Furniture house, destroyed.
Randolph, Me.—F. S. Wingate Grain Co. bldg. damaged.
San Jose, Cal.—Whse. of James Transfer & Storage Co. damaged.
Columbus, Kan.—Hutson bldg., occupied by restaurant and four apts.; State Theatre bldg.; and Pugh bldg., occupied by three business firms, destroyed.
Salt Lake City, Utah—Wasatch Oil Refining Co. processing plt., damaged.
Bremerton, Wash.—Shell-Bac Club, Kitsap Lake, destroyed.
Oakland, Cal. — Two-story Naval and Marine barracks at the Naval Air Station, Oakland Airport, destroyed.
Roxbury, Mass. — Bldg., 1887-1889-1897-1899 Washington Street, destroyed.
Penn Yan, N. Y.—Two business bldgs. downtown section, occupied by paint store, grocery and meat market, damaged.



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Lubbock, Tex.—Incompleted last stands of Texas Tech Stadium damaged. Oiled lumber.
Chicago, Ill.—Channell Textile Co. damaged.
Chicago, Ill.—Stanley Wood Products Co. damaged.
Buffalo, N. Y.—Feed mill of Spencer Kellogg Co. damaged.
Wilkes-Barre, Pa.—Packing and shipping bldg. of Teen Timers, Inc., wearing apparel mfrs. Explosion.
York, Pa.—York-Shipley, Inc., oil burning equip. mfrs. destroyed.
Los Angeles, Cal.—H. C. McKinney Co. boat-yard berth and cruiser destroyed. Arson.
Modesto, Cal.—Labeling room of Flotil Cannery destroyed.
Monterey, Cal.—Del Ray theatre, Seaside, destroyed.
Sauk Center, Minn.—Oman Auto Supply Co.; M. & M. Variety store and Waldorf cafe and hotel, damaged.
Philadelphia, Pa.—Plt. of Electric Service Mfg. Co. damaged.
Montpelier, Vt.—Brown Derby dine and dance restaurant destroyed.

Persons in the News

Dougal Secretary New Jersey Chiefs

Clarence H. Dougal, Westwood, N. J., has been appointed secretary of the New Jersey Fire Chiefs' Association to fill the post originally held by Gus Day, who has been ill.

Chief Bender to Retire

Fire Chief Frank W. Bender, Jr., since 1931 head of the Saginaw, Mich., Fire Department, and a Director of the Great Lakes Division of the International Association of Fire Chiefs, will retire this summer in accordance with Michigan's new law making retirement at 65 obligatory for policemen and firemen.

Chief Bender and his department recently received high praise from the Saginaw press in a full page illustrated article in the Saginaw News.

Ed Jagger Made Honorary Chief

Ed Jagger, globe trotting fire buff, Asst. Secretary of the American Society of Civil Engineers and member of the Fire Bell Club of New York City, was presented with a badge of Honorary Chief in the Birmingham, Ala., Fire Department by Assistant Chief Hoyt Ayres of that Department before a crowd of Birmingham firemen and fire fans at the recent President's Conference on Fire Prevention in Washington.

Jagger, a 'Birminghamite' by birth, calls Fire Station 3 of that City's Fire Department his 'headquarters' whenever he's in that city.

Veteran Chiefs Honored

In honor of their 40th anniversary in the Alexandria, La., Fire Department, Fire Chief Ralph Neff and Assistant Chief W. H. McCracken were signally honored by the officials and citizens of their city on June 6, 1947.

That date was declared by Mayor Carl B. Close in a formal proclamation, to be Fire Department Day, in honor of the two stalwarts, the oldest men of the department in point of service.

The proclamation disclosed that forty years ago the two chiefs came to the city from Lake Charles, La. At that time the fire department was hardly

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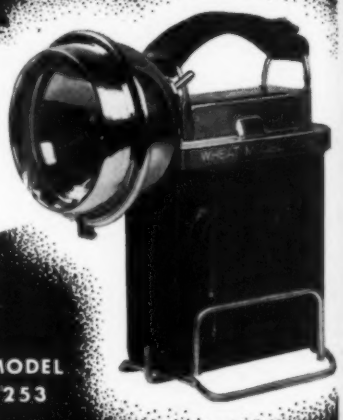

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FEATURES

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- Positive "Non-spill" construction.
- Light can be focused and directed as desired.
- Weighs only 95 ozs. complete.
- Simple to charge and water. No need to take lamp apart.
- Price and operating cost make Wheat adaptable to any budget.

2,500 FOOT BEAM
25,000 CANDLE POWER
1,000 HOURS OPERATION

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MARLBORO, MASSACHUSETTS

more than a name. Since that time, largely under their guidance, the department has been expanded to four fire stations with 66 full-time personnel, and fully motorized, modern equipment.

A feature of the ceremonies was a full-page announcement in the local newspaper commending the service of the two veterans, signed by the City of Alexandria. In congratulating them, the announcement pointed out their official connection with the department began June 6, 1907. Both men served as drivers. In July of that year Ralph Neff was appointed Assistant Chief and held that position until 1910, when he was promoted to Chief. Mr. McCracken served as driver and captain until 1913 when he was appointed Assistant Chief.

The two men, native Texans, have served successfully through thirteen different political administrations in their forty years.

Chief T. G. McCarthy Dies

Fire Chief Timothy G. McCarthy, a member of the Weymouth, Mass., Fire Department since 1927, died suddenly of a heart attack on June 21.

A native of Weymouth, Chief McCarthy was made a lieutenant in May, 1928, and in December of that year was appointed captain. In October, 1938, he was promoted to chief of the department.

Chief McCarthy was a member of the International Association of Fire Chiefs, the New England Association of Fire Chiefs and the Massachusetts Fire Chiefs Club.

Ex-Chief Bement Dies

Former fire chief Henry Bement of the Excelsior Volunteer Fire Department, Excelsior, Minn., died May 15, after twenty-nine years and two months continuous fire service, during which time he served fourteen years as chief. He had been a member of the department since March 15, 1918, and was a native of New York City. He was past-president of the Minnesota State Fire Department Association and served on numerous committees of that Association.

David Godwin Killed in Air Crash

David P. Godwin, fire control chief of the National Forest Service, died in the Leesburg, Va., plane crash in June. He was a veteran of the forest service and a pioneer in modern methods of fighting forest fires. He was in charge of the defense against the threat of Japanese incendiary balloons and bombs in forest regions during the war, and was a native of Norfolk, Va., and a member of numerous fire prevention and engineering organizations.

Ed. Shearwood Dead

Former Assistant Fire Chief Edward Shearwood of the Cincinnati, Ohio, Fire Department, died on June 16 after a short illness. He was 71 years of age and had spent 46 years in the Cincinnati Fire Department.

He entered the department in 1899, was promoted to lieutenant in 1907, to captain in 1911, to district marshal in 1917 and to assistant chief in 1927.

HALE TYPE FZZ Portable Pumping Unit

From Draft: 60 GPM at 90 lbs., 150 GPM at 30 lbs.

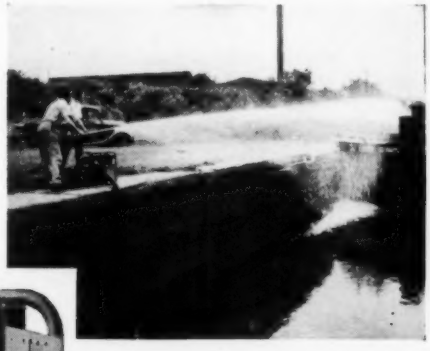
The new Hale FZZ centrifugal pumping unit is a powerful, rugged, ready-to-use unit, built for portable or semi-portable use. Compact, dependable and efficient, it is built to stand long hours of continuous pumping. The unit will supply, from draft, 60 U. S. gallons per minute with a pressure of 90 lbs., up to 150 U. S. gallons per minute at 30 lbs.

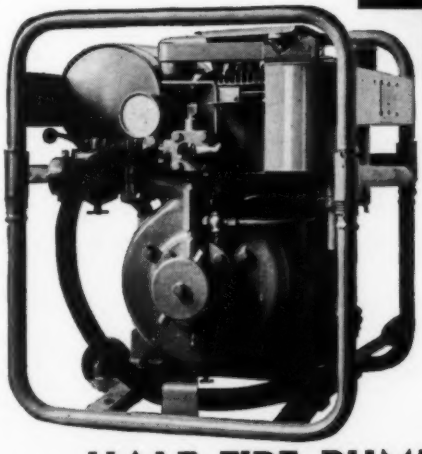
The FZZ is ideal as an auxiliary for pumping into booster tank or direct into suction from stream or source of water which major pumper cannot reach with its suction hose. (See picture above.)

It can be mounted or carried on virtually any type of equipment, making it possible to fight fire while in motion, using a booster tank for source of water.

Simplicity in design and reliability are exemplified in the Hale single stage centrifugal pump, bolted direct to a 7.7-H.P., four-cycle, single-cylinder, air-cooled engine.

The Hale Ejector Priming system eliminates priming pumps, clutches or gears.





Above — FZZ Throwing Foam through 1½" hose line. Foam Proportioner built in, if specified.

Left — Close-up view of FZZ in frame, with carrying handles turned in. Can be carried easily by two men. NOTE: Hale FZZ portable pumping unit is also available mounted on iron straps or with two-wheel truck mounting on 12x2 pneumatic tires so that one man can wheel it easily where needed.

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THE MEARL CORPORATION

153 Waverly Place, New York 14, N. Y.

He inaugurated the school program of training for fire fighters in Cincinnati, under the direction of Chief Barney J. Houston, and was the first drill master.

He wrote the rule book governing the Cincinnati Fire Department and was well known for his running system of apparatus.

Chief Shearwood was retired from the Cincinnati Department on January 1, 1946, and spent much of his leisure time instructing volunteer fire departments in northern Kentucky and southern Ohio.

Obituaries

Charles F. Marquard, in command of the 12th Division, New York Fire Department, died on June 2, 1947, terminating a service of over thirty years.

Captain John Kistenberger, formerly a member of Engine 66, New York Fire Department, and during the war, following his retirement from the department, active in the fire protection of New York Harbor, died May 31, 1947.

World Wide Fire News

By Roi B. Woolley

The War Isn't Over for These Firemen

In Benecia, Calif., five men were injured by flying bullets and steel fragments as a fire exploded a quantity of small-arms ammunition stored in an outdoor revetment at the big Benecia arsenal May 28 last.

The bullets, mostly combat ammunition and including tracers, endangered 200 firefighters, who required more than two hours to extinguish the blaze and whose operations were reminiscent of firemen on many a 'hot front' during World War II.

* * *

Pardon Our Terror, Says U. S.

This dispatch comes from El Paso the Southwestern City, which with its sister Juarez, across the border in Mexico, took the world's first atomic bomb explosion in wartime stride but got a real scare out of a near-hit by a German V-2 bomb that pulled a Corrigan.

The atomic bomb was tested at White Sands, N. M., proving ground two years ago July 16. It lighted the night over Mount Franklin and El Paso but, under censorship, residents never knew its real significance until the bomb was dropped on Japan.

The rocket that caused the ruckus was fired late in May, last, from a proving grounds site more than 40 miles north of El Paso. It was an experiment to test secret American developments toward push-button warfare.

A German-made gyroscope failed and the rocket soared wild—south instead of north—over Mount Franklin, across El Paso, and smashed into a hillside near a cemetery, three-and-a-half miles from the middle of Juarez. Luckily the 4½-ton missel didn't carry the ton or more of explosives that the Germans loaded it with in the bombing of London. Nevertheless the concussion of its 12-miles-a-minute crash into the earth jarred windows out of the El Paso Central Fire Station, broke windows and cracked plaster in homes on both

sides of the International Border, and upset an empty airplane at an El Paso airport.

Major Gen. John L. Homer, Fort Bliss, (Tex.) commanding officer, gave hurried apologies to Brig. Gen. Enrique Diaz Gonzales, Mexican Commander at Juarez and the Mexican Foreign Office announced receipt of a formal apology from the U. S. Government.

The army said it would continue rocket test firings. Meanwhile no outspoken report has been heard from firemen of the area who're sympathizing more and more with their British Brother Firemen of blitz days.

* * *

Twenty Years Have Brought a Difference

On May 20-21, 1927, air pioneer Charles Lindbergh flew from New York to Paris, covering 3,640 miles at a speed of 108 M.P.H. In twenty years what was a daring feat has become routine for thousands of persons who fly the ocean regularly.

Those who are pondering just how far and how fast we've gone in the air—and incidentally, what it all means in the way of extra hazards for the fire service—might consider these contrasting data:

Lindbergh's "Spirit of St. Louis": Length 28 ft.: wing span 46 ft.; engine: single, 9-cyl. 200 H.P.; Gross weight, 5,200 lbs.; maximum speed, 123 M.P.H.; Gas load, 451 gals.

Today's giants of the skies: Length (XC-99) 163 ft.; wing span, (B-36) 230 ft.; engines (B-36) six, 168 cyl., 18,000 HP; Gross weight, (B-36) 278,000 lbs.; maximum speed, (P-80) 660 M.P.H.; Gas load, (XC-99) 19,000 gals.

Of course that isn't all. Lindberg's "cargo" consisted of 5 sandwiches, 2 canteens of water, 2 chocolate bars. The XC-99 of today can carry 400 men, or 100,000 lbs. of cargo. Lindbergh had a crew of one. Today's B-36 for example carries a 12-man crew. Lindberg's ship had few safety devices, just a periscope for frontal view; flashlight for signaling, and smoke bombs and a raft. Today's airliners carry fire fighting equipment; de-icing equipment; radio aids; warning lights linked to landing gear; gas tanks etc.

From the firefighter's viewpoint the modern sky Pullman packs a terrific load of potential trouble. Not only its gas load of many times that of the average gasoline delivery tanker that daily rides our roads, but its oxygen, hydraulic fluid, pyrotechnics (flares, etc.) and its combustible construction (largely magnesium) give the fire service plenty to ponder over.

Texas City Buries 63 Unknown Dead

Sixty-seven days after its disaster of explosions and fires, Texas City, on June 22 buried its sixty-three remaining unknown dead in a one-acre memorial cemetery on the Texas coastal plains.

More than 2,000 persons attended the twenty-minute all-faith service for those unidentified among the 468 known victims of the nation's greatest post-war disaster.

Before the burial, officials of the State Department of Public Safety made records of the personal effects of each body. Such records, now at the Texas City Municipal Building, bear an identification number that corresponds with a number on the victim's grave.

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(Signed) Wesley Holcomb

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The ROUND TABLE

For Practical Discussion of Current Fire Department and Fire Management Problems

JUVENILES—AND ARSON

THE discussion in this Round Table is a continuation of that which appeared in the April, May and June issues of FIRE ENGINEERING on juveniles and arson.

The generous response from our readers makes it necessary to carry the discussion over to this issue and to the August issue as well.

Readers are invited to send in their comments on this subject. Address communications to Round Table Editor, FIRE ENGINEERING, 24 West 40th Street, New York 18, N. Y.

HERE IS THE QUESTION

1. **Have you experienced any cases of fire setting by juveniles during the past year?**
2. **How many fires are believed to have occurred from this cause during 1946?**
3. **Did any such fires develop into major ones? If so, what were estimated losses?**
4. **What do you believe to be the basic cause of juvenile fire setting today?**
5. **What suggestions would you make for correcting this dangerous development.**

Discussion of the Topic

Edward Joseph Page, Chief, Madison, Wis.: We have had twenty-five fires caused by juveniles, broken down as follows: Four believed caused by juveniles; ten fires set by accident while children were playing with matches and fire; ten fires deliberately set by juveniles ranging in age from five to ten years; one fire set by a seventeen-year-old youth in a theatre. This fire was extinguished by the assistant manager of the theatre before it became serious. This youth was later committed to a mental institution.

None of the fires developed into major proportions.

From the above records it can be seen that the problem of the setting of fires by juveniles in Madison has as yet not become acute. With one exception, *closer parental control* and proper education regarding the dangers of playing with fire and matches would have eliminated the great majority of these fires. The one exception, that of the seventeen-year-old youth, was unpredictable since, as far as we know, he had no previous record of this type of misdemeanor.

The setting of fires must be regarded as a manifestation of a criminal mind. In the case of the juvenile, it is very rarely set for gain but mainly for the experience of a thrill, with no regard for lives or property which might become involved.

The fact that the fire is usually set in the open or in a public building where it is usually reported before it reaches a serious proportion should not be held in favor of the delinquent.

In most cases, if no lives are lost or serious property losses result, the crime is ignored by the public. However, because of its serious possibilities, this problem must be considered as an attempt to commit a crime with suitable penalties provided.

A close cooperation between the law enforcement agencies, the fire prevention bureaus, and the courts is necessary, for a more complete suppression of this act.

E. P. Feaster, Chief, Lincoln, Neb.: The Lincoln Fire Department has exeprienced considerable trouble from fires set by juveniles during the past year.

From January 1, 1946 to March 21, 1947 we have had 26 alarms from this cause.

None of the above fires was of major proportion. The total loss from this cause was $1,938.26.

I think the basic cause of juvenile fire setting is the lack of proper supervision in the home.

I think the answer to this dangerous development is education in the home, as these fires are sometimes set by children too young to be contacted through the schools.

George S. Lockhart, Chief, Minneapolis, Minn.: We have experienced cases of fire setting by juveniles.

From January 1946 to January 1947 we have had 143 such cases.

One 12-year-old boy set four fires with an estimated loss of $18,000; and a 13-year-old boy set 13 fires with an estimated loss of $22,000.00.

We believe the basic cause of juvenile fire setting today is lack of parental supervision.

We would like to see laws enacted in this state to make parents responsible for the financial loss sustained in such fires. Publicity should also

pe given to the misdeeds of these juveniles by printing, in the daily papers, the names of parents and facts of these cases.

From our experience we have found that proper parental guidance in above cases was negligent in not only homes in a poor neighborhood, but also in the so-called good homes. The above two cases of losses of $18,000 and $22,000 were causes by juveniles from poor homes and poor neighborhood; yet we recently had two boys 13 years old who set three fires within an hour at an estimated loss of $1,200.00 and these boys both came from good homes in which there was also a lack of supervision by parents.

J. K. Piercey, Chief, Salt Lake City, Utah: During the past year 276 fires were set by children in Salt Lake City, 218 of them grass fires started with matches and fireworks. Of the remaining fires only 14 were caused by children over 10 years of age, and very few seemed to have been deliberately set or of criminal nature. The most serious of this nature were as follows:

1—Two boys, 10 years old, threw lighted papers on the porch of an old man they were having trouble with. No damage.

2—A youth, 18, and a man, 22, threw gasoline over the outside wall of a frame home and started it burning when two girls living there refused to go out with them. Damage $15.00.

3—A gang of boys threw burning paper into the hallway of a home when occupants chased them away and complained to police of their activities. Damage $5.00.

Fires incurring the greatest damage were started by smaller children playing with matches, eight such fires reaching more than $100.00 loss and two reaching $1,000.00 loss.

The basic cause of fires here by juveniles seems to be curiosity or fascination children have for fire, rather than criminal tendencies. Parents seem more at fault in most cases by allowing matches to remain in reach of the children, in letting them have bonfires and in letting them play unsupervised.

Edward Grenfell, Chief, Portland, Ore.: From January, 1946 to date we have had 38 fires caused by juveniles. None of these, however, developed into major ones.

The basic cause of juvenile fire setting, in my opinion, is the fundamental factor that children like to play with matches and fire, coupled with an increasing interest on fire through national publicity.

I believe that an intensive educational program in the schools with materials based on modern educational trends would help to correct this problem. This should be taught on a classroom basis and worked into the regular curriculum. Junior fire squads would be of great advantage.

The following case is interesting. A fourteen-year-old boy was employed in a grocery and meat store after school and on Saturdays. His employer went on a vacation after instructing his meat-cutter to take charge of the store. The meat-cutter ordered the boy to do some cleaning up in the rear of the store which the boy did not like. To discredit the act-

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Competitor	"A"	"B"	"C"	"D"	"E"
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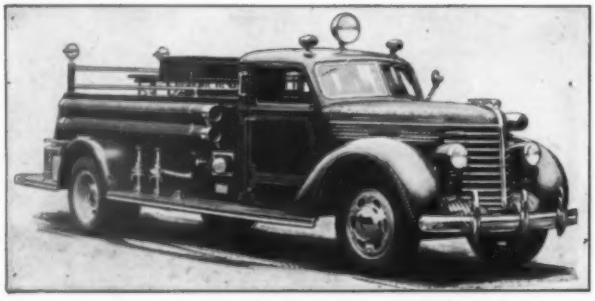

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ing boss he set fire to the rear of the store and went away. The fire in the stockroom caused damage to the building to the extent of $1665.86 and to the stock of $2,100. The next evening in the absence of his parents, he set fire to some clothing in the attic of his home, doing damage to the building to the extent of $240 and an estimated damage to the contents of about $150 on which no claim was made. After much questioning, he broke and admitted that he set fire to both places to spite his acting boss and his step-father. This boy was turned over to the juvenile authorities and sent to the State Training School for Boys.

The parents told us that the boy was a problem child who gave them a great deal of trouble. During our investigation, it was brought out that the mother resented the step-father for correcting the child. The boy knowing this soon got out of hand and did as he pleased. In our opinion, if the mother had let the step-father correct the boy to a certain degree, this would not have happened.

Captain H. C. Fisk, Secretary, Tacoma Fire Department, Tacoma, Wash.: The Tacoma Fire Department has fifteen cases of children playing with fire or matches. Five of them, however, caused no loss.

On April 15, 1946, we had in Tacoma a self-styled "Frankenstein monster" who took a small round cardboard cylinder in which he placed the heads of hundreds of matches and then filled the cylinder with wax. He placed this "bomb" on the stage of a youth center and set it afire. We had the good fortune to have some of the other boys find this "bomb" before it had gained much headway. We have the "bomb" in our library and also had the boy down to Headquarters for questioning. As of this date, we have had no other complaints from this lad.

In most cases juvenile fire setting is caused by lack of supervision on the part of parents. The parents work in a number of instances, leaving the children to themselves. The youngsters get the wrong kind of reading material and often see the wrong type of moving pictures.

I believe there should be better educational material against fires. Facts and figures on fire losses should be given and also pictures of burn cases should be published.

J. E. Parrish, Chief (Retired), San Diego, Cal.: We have had 147 cases of juvenile fire setting. None of these, however, was of major proportions.

The basic cause in a large percentage of the cases handled by this department can be traced back to conditions in the home; also to the knowledge of juveniles that they can get away with it. In a large number of our cases a little talk by the Probation Department is all that can be expected in the way of punishment. Needless to say, it has had little effect upon said juveniles.

P. J. Daly, Chief, Toledo, Ohio: From January, 1946 to date we have had eighty-seven fires caused by juveniles. On May 10, 1946, a fire occurred which caused a $2,100 loss. This fire was caused by two boys, each five years old, who were sent to the store for cigarettes for their mothers. They

obtained matches before leaving and went to the rear of a duplex and set fire to straw.

In another case a twelve-year-old boy set fire to a house because the occupants had him arrested for stealing a bicycle from their son.

In all, twenty-six juveniles have been taken into custody for deliberately setting fires.

In general, the causes of juvenile fire setting are: curiosity on the part of the child to see whether or not something will burn, carelessness with matches, lack of knowledge as to danger of fire, and just plain meanness.

I believe that the school education program should include something on fire and its dangers. I also believe that the parents should be held responsible for any fire loss caused by their children.

Thomas J. Phelan, Chief, Trenton, N. J.: During the past year we have had only two or three fires that were started by youngsters from six to ten years of age. None of these developed into major proportions.

In my opinion, the fires that we have experienced are due to curiosity of youngsters for fires and excitement, and I do not attach any significance to juvenile delinquency in these cases. Yet there is no doubt in my mind that the so-called entertainment that children receive through motion pictures, radio and the funny papers have to a large extent been responsible for this so-called juvenile delinquency. In my opinion, this term is a misnomer. The delinquency is rather parental instead of juvenile, and in most cases where a careless and lackadaisical home is found, juvenile delinquency accompanies it.

Z. F. Drouin, Chief, Lewiston, Me.: Eight fires are believed to have been caused by juveniles during the period from January, 1946, to date. Estimated losses from these fires were in the neighborhood of $3,500.

One fire involved three boys who were playing house in a large barn last December. They placed newspapers in an old stove and lighted it which set fire to the walls of the barn. The wind was blowing and the fire endangered the surrounding wooden buildings. The fire caused some $2,200 worth of damage.

I believe fire prevention education should be included in the curriculum of the schools. Parents should also teach the their children how to prevent fires.

J. F. Finnegan, Chief, Richmond, Va.: We have had only one fire caused by a juvenile. On December 26th and 27th a youngster set fire to his home. The boy and his mother were arrested, but dismissed. On April 26, 1946, he again set fire to his home. He was confined to the epileptic colony in Lynchburg.

William H. Davis, Chief, Pittsburgh, Pa.: In the period under discussion, ten fires are alleged to have been set by juveniles. Six have been proven. All the fires were single alarm fires. Four thousand dollars is the highest estimated single loss from such fires.

These all seem to be out and out juvenile delinquency.

We have a number of cases which are interesting:

An eight-year-old boy, left alone at home, began smoking and set the

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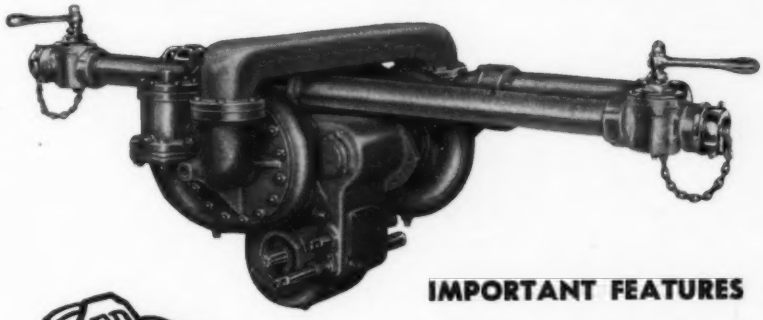

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house afire. He himself suffered second degree burns.

In another case, at least one, and perhaps two, boys entered a home after the occupants left for the day. After ransacking the house, it was set afire. One boy was sent to the Juvenile Court and placed in detention for one year. The other boy is still being investigated.

In a third instance, a boy set a bus station garage afire three times. He was trapped by detectives after the third attempt and sentenced by the Juvenile Court to detention.

Frank H. Burns, Chief, Grand Rapids, Mich.: Only one fire was intentionally caused by juveniles. Twenty-three were unintentionally set. These are due to lack of supervision on the part of parents and inadequate means of entertainment.

In Grand Rapids we have established youth centers, or community centers, under the supervision of the police department. These are equipped with recreation facilities, work shops and other accommodations for occupying their time.

Wilbur Seaman, Chief Fire Marshal, Hempstead, N. Y.: We have had a few cases of juvenile fire setting in the last year, but lucky enough they were in grass and rubbish in fields. The number has been small, namely three, and none of the fires developed beyond the routine grass fire.

In the cases mentioned the cause was definitely lack of parental influence and care, although I do not believe that to be the whole cause of the present juvenile problem.

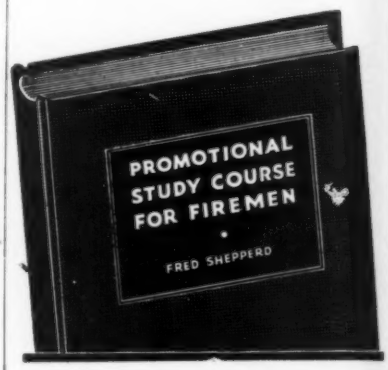
To correct this condition I believe a nationwide program of education for both parents and children is necessary. I know this is a big order and I feel that a large part of the Presidents Conference should have been alloted to the problem and if necessary, or possible, that the Federal Government should organize such a program among churches, schools, boy and girl scouts, other youth organizations, civic associations, fraternal orders, luncheon clubs and any other organizations interested. I know that this is a comprehensive program, but there is hardly a week in the calendar year that does not carry some designation such as our own Fire Prevention Week, and if every one of these designated weeks were organized by some well planned program on the juvenile problem as part of the plan I feel that we could make great inroads in solving it. I know in my own village, records prove that as far as the fire end of the problem is concerned, I have been able to cut down considerably on false alarms and setting of grass fires, by education in the schools and the fire stations, of the children of school age. I find they are very impressionable and in most cases interested and willing to do the right thing and become a help and not a hindrance if you treat them right and give them a break.

L. D. Blanton, Chief, Tampa, Fla.: We have had no cases of juvenile fire setting in the period under discussion.

Children who set fires usually have deranged minds and set fires for thrills.

They should be apprehended and placed in proper schools for correction.

A Bible of Instruction



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Questions and Answers

Branched Layout

To the Editor:

Four hundred feet of 2½-inch hose is connected from a hydrant to the intake of a 1,000-gallon pumper from which 100 feet of 2½-inch hose, wyed into two lines of 1½-inch hose equipped with ½-inch nozzles, is stretched. Hydrant pressure is 60 pounds. It is desired to get 30 pounds nozzle pressure.

What is the friction loss from the hydrant to pumper?

What is the pressure at the engine intake?

What is the discharge at the intake?

What is the engine pressure required to supply tips?

What is the friction loss from pump to tips?

What is discharge at tips?

Is such a lay out practical on a dead end main?

I solved the above problem as follows:

First find the nozzle pressure from first hydrant to pump.

$$N.\ P. = E.\ P. \div (1.1 + KL).$$

K, for open butt, is 3.35, and L, the number of 50-foot lengths of hose in the line, is 8.

Therefore

$$N.\ P. = 60 \div (1.1 + 3.35 \times 8)$$
$$= 60 \div 27.9$$
$$= 2.15$$

Then find discharge.

$$\text{Discharge} = 30 \times D \times D \times \sqrt{P} \times .9 \text{ (open butt)}$$
$$= 246.24 \text{ gallons per minute.}$$

Friction loss is equal to $2Q^2 + Q$, or 57.84 pounds per square inch for 400 feet.

Then find the engine pressure at the pumper.

$$E.\ P. = N.\ P. \times (1.1 + KL).$$

N. P. = 30, K is .042 and L is 9.

Therefore

$$E.\ P. = 30 \times (1.1 + .042 \times 9)$$
$$= 44.10 \text{ pounds.}$$

Discharge is 91.89 gallons per minute.

Friction loss per 100 feet for flows less than 100 gallons per minute is found by using the formula

$$F.L. = 2Q^2 + 1/2Q.$$

Friction loss for the stretch is 9.97 pounds.

D. W. B.

Answer: Your solution is in error in that you started with the assumption that the full 60 pounds at the hydrant is forcing the water through at full capacity, of the 2½-inch hose, to the

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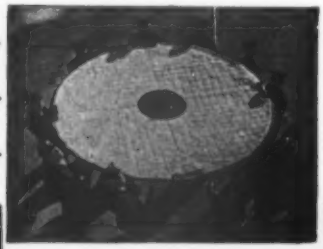
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pumper. In other words, you assume that the 60 pounds at the hydrant is being fully utilized in overcoming friction loss to the engine. As a matter of fact, the amount of water flowing through the 400-foot line of 2½-inch hose is far less than the 60 pounds at the hydrant could provide.

The proper method in solving this problem is to start at the other end of the layout. Each ½-inch nozzle is to be operated at 30 pounds pressure.

Discharge from a ½-inch tip at 30 pounds pressure is 40.7 gallons per minute. The friction loss in 100 feet of 1½-inch hose carrying 40.7 gallons per minute is 6.3 pounds. Then the pressure at the wye connection, feeding the two 1½-inch lines is 30 plus 6.3, or 36.3 pounds.

The total flow through the single line of 2½-inch hose supplying the wye connection is equal to the discharge from the two ½-inch nozzles, or 2 x 40.7, or 81.4 gallons per minute.

Friction loss in 100 feet of 2½-inch hose carrying 81.4 gallons per minute is equal to $2 \times Q \times Q + ½ Q$, or $2 \times .814 \times .814 + .407 = 1.737$ pounds.

Then the pressure at the pumper will be 36.3 + 1.37, or 38 pounds approximately.

The friction loss in the 400-foot line of hose from the hydrant to the pumper will be $4 \times 1{,}737$, or 6.948, or 7 pounds approximately.

Thus the pressure at the hydrant would need to be only 38 + 7, or 45 pounds to supply the two ½-inch tips at 30 pounds pressure. Actually, no pumper would be needed under these conditions.

Were the pumper operated, it would be operating in the neighborhood of 38 pounds as indicated above, which would require but very little of its power. The discharge would be only 81.4 gallons per minute.

Impractical Stretches

To the Editor:

Two lines each 1,000 feet in length and equipped with 1¼-inch tips are stretched from a pumper. Engine pressure is 120 pounds and the rated capacity is 750 gallons. Will the pumper actually give this performance or will the two lines together give 750 gallons? H. F. W.

Answer: You ask information on the layout consisting of a 750-gallon pumper, operating at 120 pounds, and pumping through two parallel lines of 2½-inch hose each 1,000 feet in length. Each line is equipped with a 1¼-inch nozzle.

The question is whether or not with this layout the full capacity of the pump at 120 pounds will be utilized.

Solving for nozzle pressure we use the following formula:

N. P. = E. P. + (1.1 + KL)
E. P. is 120 pounds.
K is .248.
L is 1000 ÷ 50 = 20
Then N. P. = 120 + (1.1 + .248 × 20)
= 20 pounds approximately.

Discharge from 1¼-inch nozzle at 20 pounds pressure is 206 gallons per minute. From the two 1¼-inch nozzles it would be twice as much or 412 gallons per minute.

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Twenty pounds is entirely unsatisfactory nozzle pressure. It could be raised somewhat by using a smaller tip.

Employing a 1⅛-inch tip, the nozzle pressure is 28 pounds, and the discharge, 194 gallons per minute from one nozzle, or 388 gallons per minute from the two nozzles.

Using a still smaller tip, a 1-inch, the nozzle pressure will be 37 pounds approximately, and the discharge, 180 gallons per minute from one nozzle, or 360 gallons per minute from the two nozzles.

It will be seen from the above that in the layout given the engine will not be delivering its full capacity. Nor is the nozzle pressure at all satisfactory with 1¼-inch tip.

Layout for Ladder Pipe

To the Editor:

Our aerial ladder trucks are provided with a ladder pipe mounted stationary on the bed ladder to provide a stream 40 feet above the ground. The ladder pipe is fitted with a standard 2½-inch coupling from which is hung a 40-foot, or shall we just say, a 50-foot section of 2½-inch hose. At the base of this hose is a 2½ x 2½ x 2½-inch siamese. We have three tips for the ladder pipe, a 1¼-inch, a 1½-inch and a 1¾-inch. There has been some question as to the efficiency of a 1¾-inch stream from two siamesed lines of 2½-inch hose after passing through the one section of 2½-inch hose up to the ladder pipe. Can a satisfactory stream be secured from two lines of 2½-inch siamesed? What would be the effect of three lines siamesed? 500 feet from pump to siamese; use 70 pounds nozzle pressure, 1¾-inch tip.

J. H. W.

Answer: At 70 pounds nozzle pressure, discharge from a 1¾-inch tip gives 761 gallons per minute.

The friction loss in 100 feet of 2½-inch hose carrying 761 gallons per minute is 123.4 pounds.

The friction loss in 50 feet of 2½-inch hose at the same flow is 61.7 pounds.

The pressure at the siamese will then be:

Back pres. = 40 × .434	= 17.36	pounds
Nozzle Pressure	= 70.	pounds
Friction Loss	= 61.7	pounds
Total	149.06	pounds

The stretch from the pumper to the siamese is 500 feet.

Assuming that we are using two lines, each will carry 761 ÷ 2, or 355 gallons per minute, approximately.

The friction loss per 100 feet of 2½-inch hose carrying 355 gallons per minute is 29.3 pounds.

The friction loss in 500 feet will be five times as much, or 146.5 pounds.

The engine pressure will then be 146.5 + 149.06 (pressure at the siamese) = 295.56 pounds.

If three lines are used each will carry 761 ÷ 3, or 253.67, or 254 pounds approximately.

Friction loss in 100 feet of 2½-inch

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hose carrying 254 gallons per minute is 16 pounds approximately.

Friction loss in 500 feet will be five times as much, or 80 pounds.

The engine pressure will then be 80 + 149.06, or 229 pounds approximately.

No single pumper could deliver 761 gallons per minute at 295 pounds pressure. Only the very largest pumper could deliver 761 gallons at 229 pounds engine pressure.

Magner Visits Western Departments

The time-worn adage that Californians are interested only in their native sons, has been knocked into a cocked-hat, according to Tom Magner, FIRE ENGINEERING's New England correspondent. Tom, accompanied by his wife, recently made a trip from his home in Bridgeport, Conn., to the Pacific Coast and while there visited many of the larger city fire stations.

"Chief John Alderson of the Los Angeles Fire Department, is 'tops' in my book as a host," says Tom. "We were received with open arms when we visited Chief Alderson in his office at Fire Headquarters on South Hill Street. In the midst of a Bond Drive to better the working conditions in Los Angeles Chief Alderson took time to explain the arduous task of running one of the largest fire departments in the world today; the large area covered by the L. A. Department of over 2,000 men, and the record of fires extinguished during a month's period.

"The following morning a Fire Department car with Fireman Alsen Inman of Engine 3 at the wheel, met us at the Biltmore Hotel and we were taken for a tour of the city and surrounding towns of Hollywood, Beverly Hills, etc. A stop was made at Terminal Island, San Pedro, where we boarded the L. A. No. 2 fireboat commanded by Capt. Maurice P. Allen. The L. A. No. 2 is the largest of the Los Angeles fireboats and has a crew of 14 experienced marine firefighters.

"At Pasadena we were the guests of Fire Chief Cleveland C. Bolz who gave up a greater part of a Saturday afternoon to escort us in fire chief's car throughout this beautiful city made famous for the Rose Tournament and Rose Bowl football game on New Year's Day each year.

"Following an inspection of the Pasadena Fire Alarm Headquarters and inter-departmental radio system, a uniform driver, on orders of Chief Bolz, escorted us back to our hotel."

N.B.F.U. to Study Ammonium Nitrate

As a result of the Texas City disaster, a new research project covering the properties of ammonium nitrate that are significant as regards fire and explosion hazards will be undertaken by Underwriters Laboratories, Inc., which is sponsored by the National Board of Fire Underwriters.

In announcing this project, W. E. Mallalieu, General Manager of the National Board, states that the Laboratories in Chicago, which are the recognized research authorities in the field of fire and explosion hazards and all devices and materials, including indus-

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trial chemicals, their manufacture and transportation, will seek the cooperation of any other organizations that may be of assistance in this work.

Alvah Small, President of Underwriters Laboratories, in outlining the new project states:

"Two somewhat related research projects have been handled previously. The earlier one of these is the subject of a Research Bulletin which relates to the use of ammonium nitrate as a fertilizer base; the later one was conducted for the account of the War Production Board which has now consented to our publication of our report as a Research Bulletin, the printer's copy for which is in preparation. It so happens that in neither of these reports is there account of exploration of ammonium nitrate per se with respect to the possibility of detonation from fire exposure.

"It is quite certain that various others will undertake investigations, by research methods, of certain aspects of these hazards. We hope, in due time, to be informed of the progress and findings resulting from most of such efforts and because of the recent occurrence in Texas are confident that organizations representing capital stock insurance will contribute to the best of their ability."

President's Conference Committees Named

Commissioner W. E. Reynolds of the Public Buildings Administration, Federal Works Agency, and chairman of the Continuing Committee of the President's Conference on Fire Prevention, on June 11 named the executive committee and the subcommittees which will implement the program to reduce fire loss throughout the country. The program was adopted by the President's Conference on Fire Prevention, May 6-8.

Members of the executive committee are: W. Walter Williams, Seattle banker and industrialist, chairman; A. Bruce Bielaski, assistant general manager, National Board of Fire Underwriters; Hubert R. Gallagher, associate director, Council of State Governments; Willard E. Givens, executive secretary, National Education Association, and Dr. James T. Nicholson, executive vice-chairman, American Red Cross.

Members of the sub-committees are: Statistics—Sidney Williams, assistant to the president, National Safety Council, chairman; Arthur C. Daniels, executive assistant, Institute of Life Insurance; Percy Bugbee, general manager, National Fire Protection Association; L. A. Vincent, assistant to the general manager, National Board of Fire Underwriters; Dr. H. L. Dunn, Vital Statistics Division, Bureau of the Census, and H. E. Hilton, U. S. Chamber of Commerce.

Building Construction, Operation and Protection—George N. Thompson, National Bureau of Standards, chairman; Hal Colling, Pacific Coast Building Officials Conference; James H. Mooney, president, Building Officials Conference of America; Frank M. Whiston, National Association of Building Owners and Managers; Earl D. Mallery, executive director, American Municipal Association; Stuart Fitzpatrick, U. S. Chamber of Commerce.

Fire Prevention Education—John J. Ahern, Illinois Institute of Technology, chairman; Col. William B. Greeley, chairman, American Forest Products

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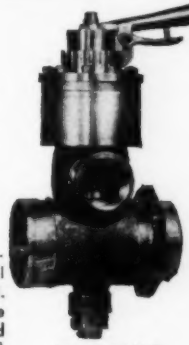

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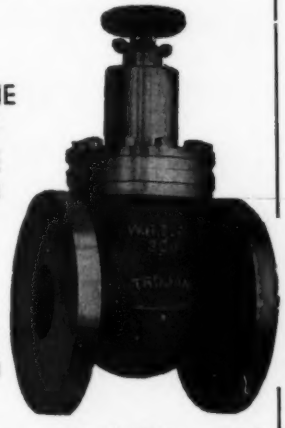

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Laws and Law Enforcement—Charles S. Rhyne, general counsel, National Institute of Municipal Law Officers, chairman; Seth B. Thompson, insurance commissioner, Salem, Ore.; Paul V. Betters, executive secretary, U. S. Conference of Mayors; Robert H. Kidd, fire marshal's section, National Fire Protection Association.

Research—Alvah Small, president, Underwriters' Laboratories, chairman; Walter A. Taylor, director, Department of Education and Research, The American Institute of Architects; Earl O. Shreve, president, U. S. Chamber of Commerce; A. V. Gruhn, general manager, American Mutual Alliance, and Julien Harvey, managing director, National Conservation Bureau.

Fire Losses for May

Estimated fire losses in the United States totalled $56,545,000 during May, a seasonal decrease of 16.9 per cent from losses of $68,029,000 during April, but an increase of 22.6 per cent over losses of $46,094,000 in May 1946, it was announced by W. E. Mallalieu, general manager of the National Board of Fire Underwriters.

The losses during May brought the total for the first five months of 1947 to $318,436,000, an increase of 25.8 per cent over losses of $253,066,000 for the first five months of 1946. Losses for the first five months of 1947 exceed full year's losses for 1942, when they totalled $314,849,000.

Losses for the 12 months ending May 31 were estimated at $626,857,000, the highest point in the nation's history, an increase of 23.1 per cent over losses of $509,094,000, for the 12-months period ending May 31, 1946.

These estimated fire losses are on an increased basis, including an allowance for unreported and uninsured losses.

Correction

In the May, 1947, issue of FIRE ENGINEERING under the title "What's Burning," the fire described as occurring in the Oxford Review Times Building, Merrithew and Kelley's Liquor Store was erroneously charged to the City of Binghamton, N. Y. Chief William D. Thomas has informed us that this fire occurred in Oxford, N. Y., which is about thirty miles north of Binghamton.

Alabama Fire School Dedicated

Dedication exercises celebrating the inauguration of the State Firemen Training Station, at University, Alabama, were held the evening of June 18, 1947. Numerous officials of the fire service were present.

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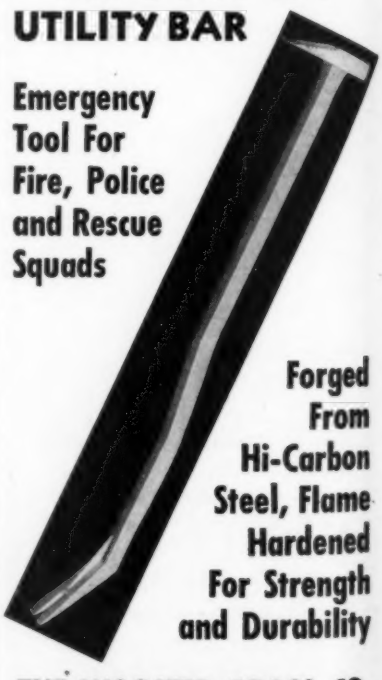

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WOOSTER, OHIO

Laxity Blamed for Texas City Blast

The report of the investigation of the Coast Guard into the Texas City disaster of April 16 fails to disclose the specific cause of the initial blast, but emphasizes the ignorance and violations of safety regulations governing the handling of dangerous cargoes.

The report noted these factors:

"Hardly without exception" all those involved in handling the cargo "displayed lack of knowledge" of safety laws.

There was smoking on the vessel, during loading operations, despite a "no smoking" rule.

Although ammonium nitrate is officially classed as dangerous, longshoremen did not get instructions on loading it.

The vessel did not receive, as required by regulations, an advance written notice that a dangerous cargo would be shipped.

According to the Coast Guard, samples of nitrate similar to the shipment (involved in the Grandcamp explosion) had not blown up when tested with bullets, fire, oil and contact with heated metal, but it urged further study to determine hazards of the substance.

The report pointed out that during loading operations on the Grandcamp, longshoremen had no specific instructions about smoking. Prohibitions against smoking were printed in the French language on various parts of the exterior of the ship, it added, but no such signs in English were posted. Control of smoking on deck and in the holds was lax. Smoking on the main deck near No. 4 hatch (reported center of the trouble) was permitted.

According to the report, the French Government owned the Grandcamp and the French Line operated it. The ammonium nitrate was consigned to the French Supply Council, which had been storing it in a warehouse preparatory to shipment. Coast Guard officers said that the shipment was handled by a freight forwarding concern, not further identified.

Stating that ammonium nitrate is listed as a dangerous substance in Coast Guard regulations, and shippers are required to give written notification to vessels concerning "characteristics of a dangerous cargo", the report added: "This was not done in the instant case."

The report also said that no specific instructions on stowage of the material were given to longshoremen who did the loading. Broken or torn paper bags were not refilled or repaired but were stowed in the holds in violation of Coast Guard regulations.

Creation of a special committee to study and determine every aspect of the characteristics of ammonium nitrate, develop additional information relative to its hazards in transportation, handling and stowage was recommended in the report. It was suggested that the board be composed of representatives of the State, Treasury, War, Navy, Agriculture and Commerce Department, the Interstate Commerce Commission, Maritime Commission and Bureau of Explosives.

The report is understood to have omitted any reference to failure on the part of anyone to notify the Texas City Fire Department of the hazards relating to stowage of the ammonium nitrate in the Grandcamp or in warehouses, or freight cars.

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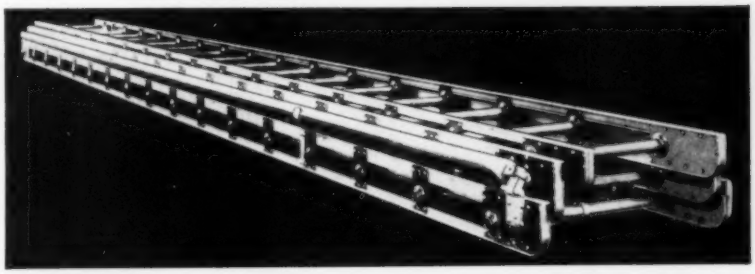

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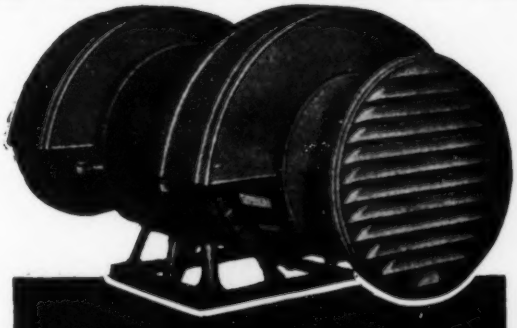

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Correspondence

From Australia

To the Editor:

I received the January, 1947, copy of FIRE ENGINEERING and read about the Wynecoff Hotel fire. That terrible hotel fire over in America has reverberated all over Australia with streamer front page headlines. Right here in this western town of Hughenden, North Queensland, the police and fire chiefs are inspecting all the hotels and are working out plans for the building of proper fire escapes from out two-story wood and galvanised iron buildings. The Wynecoff fire has stirred this action. Of course, we don't have skyscraper buildings in Queensland or in Australia like you do over in the U. S. A., but the danger of an outbreak and a fast spreading fire is always present.

On Page 23 I read where the line of advance with the hoses went on and one of the fire brigade officers said that he didn't know how many floors they went up as they climbed so many because the fire was all around the elevators. Those words "the line of advance with the hose up the blazing elevators never stopped" is romantic to me. I would like to have been one of the gallant fire fighters.

I also read of the magnificent work done by the aerial ladder trucks. It must be very spectacular to the onlookers to see those high ladders going up on rescue work.

I suppose that by the time my letter reaches New York the Atlanta hotel fire will be but a grim memory, but as I said before, the disaster reverberated all over Australia.

With kindest regards and best wishes,

A. CUSHNAN, Second Officer
Hughenden Fire Brigade

Navy Fire Fighters Organize

To the Editor:

Several of us ex-Navy fire fighters are trying to organize an ex-Sp.(F) organization.

Our organization is purely social and we are not trying to compete with any other organized group. We merely want to hold meetings where fellows can meet each other again and have a good time together.

We are meeting in Kankakee, Ill., July 25-27, and would like to get as many ex (F)'s there as we possibly can.

Sincerely yours,

WILLIAM J. MIGNERY,
Route No. 5, Elkhart, Ind.

Classified Advertisements

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Fire hose in 50 ft. lengths, 1½" double jacket cotton rubber lined with brass couplings, standard pipe thread only $12.50 per length; 400 # tested; 1½" single jacket $11.50 per length; 2½" single jacket $21.00 per length. Navy surplus stock. Top quality brands. Goodwear Rubber Co., P. O. Box 6849, Baltimore, Maryland, Zone 4.

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Convention Dates

July 20 - 25 — TEXAS FIREMEN'S TRAINING SCHOOL. Annual meeting, Texas A. & M. College, College Station, Tex. Director, Professor H. R. Brayton, Department of Chemistry, Texas A. & M. College, College Station, Tex.

July 28-30—WISCONSIN STATE FIRE CHIEFS' ASSOCIATION. Annual meeting, Stevens Point, Wis. Secretary, Chief Arthur J. Rahn, Two Rivers, Wis.

July 28-31—WEST VIRGINIA STATE FIRE SCHOOL. Annual meeting, West Virginia University, Morgantown, W. Va. R. E. Hanna, Jr., Fire Service Extension School, School of Mines, University of West Virginia, Morgantown.

July 28-Aug. 1.—PENNSYLVANIA FIRE SCHOOL. Ninth annual meeting, Lewistown, Pa. Director, Edgar A. Spotz, Adviser, Fire Service Training, Public Service Institute, Harrisburg, Pa.

Aug. 4 - 5 — WISCONSIN PAID FIREMEN'S ASSOCIATION. Annual meeting, LaCrosse, Wisconsin. Secretary, John Kromel, 4042 Sheridan Road, Kenosha, Wis.

Aug. 8-10—OHIO STATE FIREMEN'S ASSOCIATION. Annual meeting, Hotel Carter, Cleveland, Ohio. Secretary, Chief M. W. Gifford, 5105 Market Street, Youngstown 5, Ohio.

Aug. 12 - 15 — DOMINION ASSOCIATION OF FIRE CHIEFS. Annual meeting, London, Ont. Secretary-Treasurer, Chief Allan H. Clark, Lakefield, Ont.

Aug. 16—BALTIMORE COUNTY VOLUNTEER FIREMEN'S ASSOCIATION. Annual convention, Lutherville, Md. Secretary, W. A. Chenowith, Milford Road, Pikesville 8, Md.

Aug. 18—EASTERN ASSOCIATION OF FIRE CHIEFS. Annual meeting, Hotel Pennsylvania, New York, N. Y. Secretary, Chief Charles E. Clark, Box 271, Wayne, Pa.

Aug. 19-22—INTERNATIONAL ASSOCIATION OF FIRE CHIEFS. Annual meeting, Hotel Pennsylvania, New York, N. Y. Secretary-Treasurer, Chief Daniel B. Tierney, 8 Robbins Road, Arlington 74, Mass.

Aug. 19 - 22 — FIREMEN'S ASSOCIATION OF THE STATE OF NEW YORK. Diamond Jubilee Convention, Catskill, N. Y. Convention Secretary, Donald D. Haines, 153 Broad Street, Catskill, N. Y.

Aug. 28-30—WEST VIRGINIA FIREMEN'S ASSOCIATION. Annual meeting, Charles Town, W. Va. Secretary, J. D. Brehany, Ridgeley, W. Va.

Aug. 28-30 (tentative)—CONNECTICUT FIREMEN'S ASSOCIATION. Annual meeting, Naugatuck, Conn. Secretary, John Moehring, 56 Tom's Road, Stamford, Conn.

Sept. — JEFFERSON COUNTY VOLUNTEER FIREMEN'S ASSOCIATION. Annual convention and tournament, Chaumont, N. Y. Secretary, Jack Farrell, 513 Factory Street, Dexter, N. Y.

Sept. 1-5—WESTERN PENNSYLVANIA FIREMEN'S TRAINING INSTITUTE. Annual meeting, State Teachers College, California, Pa. Secretary, Henry Neill, Box 83, Vestaburg, Pa.

Sept. 2-4—KENTUCKY FIREMEN'S ASSOCIATION. Annual meeting, Hazard, Ky. Secretary, Captain V. A. Beam, 818 Sutcliffe Avenue, Louisville, Ky.

Sept. 2-5—MARYLAND FIRE SCHOOL. Annual meeting, University of Maryland, College Park. Director, Chief James W. Just, Fire Service Extension, College of Engineering, University of Maryland, College Park, Md.

Sept. 14-17—PACIFIC COAST ASSOCIATION OF FIRE CHIEFS. Annual meeting, Hotel Davenport, Spokane, Wash. Secretary-Treasurer, Jay W. Stevens, Merchants Exchange Building, San Francisco 4, Cal.

Sept. 22-25—BUILDING OFFICIALS CONFERENCE OF AMERICA, INC. Annual meeting Columbus, Ohio. Treasurer, Arthur N. Rutherford, Box 231, West Hartford, Conn.

Sept. 23-26—CALIFORNIA STATE FIREMEN'S ASSOCIATION. Annual meeting, Hoberg's, Cal. Secretary, James D. Young, 257 Robertson Boulevard, Beverly Hills, Cal.

Sept. 29-Oct. 2 — INTERNATIONAL MUNICIPAL SIGNAL ASSOCIATION. Annual meeting, Grand Rapids, Mich. Secretary, Irvin Shulsinger, 8 East 41st Street, New York 17, N. Y.

Oct. 7-9—FIREMEN'S ASSOCIATION OF THE STATE OF PENNSYLVANIA. Annual meeting, Lancaster, Pa. Secretary, Chief Charles E. Clark, Box 271, Wayne, Pa.

Oct. 21-23—NEBRASKA STATE VOLUNTEER FIREMEN'S ASSOCIATION. Annual meeting, Grand Island, Neb. Secretary-treasurer, R. D. Salak, P. O. Box 312, Schuyler, Neb.

Oct. 23-25 — OHIO FIRE CHIEFS ASSOCIATION. Annual meeting, Lima, Ohio. Secretary, William H. Rosche, Asst. Chief, Fire Department, Canton 2, Ohio.

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